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ABSTRACT

This report describes trends and patterns in school-leaver entry to higher education in Scotland. (School-leaver entrants to higher education are those who leave school and start higher education in the same year, or direct entrants.) The report uses data from the Scottish School Leavers' Survey (SSLS), a biennial sample survey of school leavers conducted in the spring after leaving school from 1978 to 1993. It is the first of a series of five reports based on analyses of the SSLS. The report is set in the context of recent developments in Scottish higher education, notably the rapid expansion of participation. It explores key policy issues, including the aim to widen access for school leavers from less advantaged social backgrounds, the role of sub-degree provision, and the role of secondary grades as preparation for higher education. The report maps school-leaver entry as of 1993, describes recent trends, and models the process of entry in order to understand student-level factors, which influence participation. Two appendices contain definitions and categories and statistical bases. Contains 22 references. (EV)

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SCOTTISH SCHOOL LEAVERS' SURVEY

ENTRANTS TO HIGHER EDUCATION

THE SCOTTISH OFFICE EDUCATION AND INDUSTRY DEPARTMENT

October 1999

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The University *of* Edinburgh

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Executive Summary

Chapter 1: Introduction

This report describes recent trends and patterns in school-leaver entry to Higher Education (HE) in Scotland. It uses data from the Scottish School Leavers' Survey (SSLS), a biennial sample survey of school leavers conducted in the spring after leaving school, for the period 1978-1993. It is the first of a series of five reports based on analyses of the SSLS. The report is set in the context of recent developments in HE, notably the rapid expansion of participation. It illuminates key policy issues including the aim to widen access for school leavers from less advantaged social backgrounds, the role of sub-degree provision such as HNCs and HNDs, and the roles of S5 and S6 as preparation for HE. The report maps school-leaver entry as at 1993, describes recent trends and models the process of entry in order to understand student-level factors which influence participation. Throughout the report HE entrants are defined to include all school leavers who start advanced or degree-level courses, either full- or part-time, directly after leaving school. Later chapters (4-6) compare entrants to advanced (sub-degree) and degree courses.

Chapter 2: The characteristics of school-leaver entrants to HE

The proportion of school-leavers who entered HE increased from 14% in 1978 to 33% in 1993. Much of this increase took place during the late 1980s and early 1990s. The expansion has continued since 1993, and data from the 1999 SSLS will enable the current analysis to be updated to 1997-98. In 1993 similar numbers of males and females entered HE, but Scottish Office statistics show that female participation has risen much faster since then. The average Highers qualifications of all HE entrants declined between 1978 and 1993, especially after 1984, although the average qualifications of degree-course entrants remained stable (see chapter 4). In 1993 nearly three quarters (73%) of all school-leaver entrants to HE had three or more Highers; a minority of the others had an equivalent number of SCOTVEC modules, and a few had A levels. A majority of entrants in 1993 had Higher and/or CSYS passes in English, maths, science and social subjects. Male and female entrants had the same average level of qualifications, but often in different subjects. Leavers from S5 comprised a declining proportion of HE entrants, falling from 32% in 1978 to 11% in 1993; they had lower average qualifications than entrants from S6, and the gap between them widened over the period. S5 has declined as an exit point for HE, especially for high-attaining students. Twice as many entrants to HE in 1993 had fathers in non-manual occupations as had fathers in manual occupations (59%: 29%), and children from non-manual backgrounds were over-represented compared to their proportion among all school leavers. There was a modest increase in the proportion of HE entrants from working class backgrounds during the period of expansion after 1988, and a more continuous increase throughout the period in levels of parental education.

Chapter 3: Which school leavers entered HE?

Entry to HE was strongly correlated with Highers qualifications, although in the years before 1993 entry rates rose most among school leavers with the fewest Highers. In 1993 90% of school leavers with 5 or more Highers entered HE, compared with 68% of those with 3-4 Highers and 32% of those with 1-2 Highers. Many more school leavers stayed on to S6, but the proportion of S6 leavers entering HE remained relatively stable, at around 60%. The proportion of S5 leavers entering HE declined between 1978 and 1990 although it rose again slightly in the early 1990s. Social class inequalities in entry to HE narrowed significantly in the late 1980s and early 1990s, and this narrowing coincided with the general expansion of participation in HE. Nevertheless the gap between social classes was still wide in 1993, and it was not all attributable to differences in Higher qualifications. There was a similar narrowing of differences between school leavers with different levels of parental education. Females achieved higher qualifications at school, but among school leavers with 3 or more Highers more males than females entered HE. Several other educational and family characteristics were associated with entry to HE in 1993. Rates of entry to HE were higher among school leavers from independent schools, among those from two-parent families or home-owning households, among those whose parents had taken an active interest in their education, among those who had never played truant, and among those who expressed favourable attitudes to school.

Chapter 4: Entrants to degree and advanced courses

Throughout the period a majority of school-leaver entrants to HE, ranging from two thirds to three quarters, started degree courses rather than advanced courses. Most of those starting degrees did so in HE institutions; a majority of those starting advanced courses did so in FE colleges. Degree course entrants had better Highers qualifications than advanced course entrants and the gap between them widened. In 1993 around two-thirds of degree course entrants had 5 or more Highers and very few had fewer than three. The overall decline in qualification levels of HE entrants, noted in chapter 2, mainly reflected trends in entry to advanced courses: the average Highers qualifications of degree course entrants remained relatively stable, while those of advanced course entrants declined during the late 1980s and early 1990s, especially among S5 leavers. More entrants to advanced courses than to degree courses left school from S5, and by 1993 more S5 leavers entered advanced courses than entered degree courses. There appears to be an emerging progression route from S5 to advanced HE courses for youngsters with low Highers or SCOTVEC qualifications. Males and females were similarly represented in degree and advanced courses, but school leavers from manual social class backgrounds, those with less educated parents and those from local authority schools were relatively likely to enter advanced rather than degree courses. These differences are not wholly explained by their lower Highers attainments. In this respect advanced courses contribute to wider access, although social inequalities in degree course entry declined at least as much as in entry to advanced courses. Most school-leaver entrants to

HE study full-time. Part-time students declined from 12% to 4% of all entrants between 1978 and 1993; most took advanced courses, and they were increasingly likely to be female.

Chapter 5: Factors influencing participation in HE

A multivariate analysis was used to identify the factors independently associated with entrance to HE. The number and grades of Higher passes were the most important factors predicting entrance to HE. Passes in mathematics tended to be most strongly associated with HE entry, and passes in creative, social and technical subjects the least strongly associated. Highers gained in S6 had equal weight with those gained in S5 as predictors of HE. S6 leavers were more likely to enter HE than S5 leavers with comparable qualifications and other characteristics. CSYS passes were associated with entry to HE, independently of Highers, but SCOTVEC modules were not. Although rates of entry to HE varied across schools, this variation could be explained by variations in the qualifications and social backgrounds of school leavers. Independent school leavers were no more likely to enter HE than local authority school leavers with comparable qualifications and backgrounds, but they were more likely to enter degree courses. The factors predicting entrance to degree courses were otherwise similar to those predicting entrance to all HE, except that the average Highers grade and CSYS passes were more important. However despite the strong influence of qualifications and other educational variables, entry to HE was not perfectly meritocratic: participation rates were lower among females than among similarly qualified males, family background influenced participation independently of qualifications and other educational factors.

Chapter 6: Applying to HE

Applications to HE, especially to degree courses, rose over the period from 1978 to 1993. However after 1990 the entry rate rose faster than applications, and the success rate of applications increased between 1990 and 1993. A higher proportion of applications to degree courses than to advanced courses resulted in entry. Nearly half of those who applied to HE but did not enter started non-advanced courses instead. Highly qualified school leavers were much more likely than the less qualified to apply to HE, and they were more likely to enter if they had applied. Young people from less advantaged family backgrounds were less likely to apply to HE, and less likely to enter if they had applied, than more advantaged school leavers with comparable qualifications. Females were as likely to apply to HE as similarly qualified males, but their applications were less likely to result in entry. There appeared to be variations among schools in the extent to which they encourage applications, but school differences in entry rates can be attributed to the qualifications and social backgrounds of their students. Independent school leavers were more likely to apply to degree courses than maintained school leavers with comparable qualifications and social backgrounds, but having applied they were no more likely to enter.

Chapter 7: Discussion

This concluding chapter pulls together the main findings of the report and discusses their implications. Instead of repeating the summaries provided in each chapter, the discussion identifies themes that run through different chapters, and is structured around the main factors determining entry to HE: school qualifications, stage of leaving school, school differences, gender and family background.

Chapter 1
Introduction

This is the first of a series of reports, commissioned by the Scottish Office Education and Industry Department (SOEID), based on secondary analyses of data from the Scottish School Leavers' Survey (SSLS). Four further reports are planned, focusing on:

- high-achieving females,
- low-achieving males,
- entrants to Government training programmes,
- entrants to employment.

The SSLS is a rich source of data on the characteristics, destinations, experiences, attitudes, attainment and social backgrounds of Scotland's young people as they make the transition from school to education, training or work. Surveys have been carried out at least every two years since the late 1970s, making it possible to analyse trends over time, a strength that will be exploited in this report. We describe the survey in more detail later in this chapter.

Background

Higher education (HE) in Scotland has undergone major transformations in recent years, especially in levels of participation and in the organisation and funding of the sector. In the 1980s demographic changes focused attention on the future demand for HE: the flow of school leavers was expected to decline by one third by the mid 1990s, and it was feared that there would be insufficient demand to fill the available places in HE. In 1985 the Scottish Tertiary Education Advisory Council concluded that the number of entrants from traditional sources was likely to decline sharply from the end of the 1980s, and advocated 'all reasonable steps ... to encourage participation, particularly from those groups where participation is at present low' (STEAC 1985, p.91). The Scottish Wider Access Programme and other measures introduced over the following years sought to 'widen' access to HE as well as to 'deepen' it.

Research conducted in the late 1980s suggested that changes in the social and educational composition of school leavers would sustain a higher level of demand for HE than the STEAC had predicted (Burnhill, Garner and McPherson 1990). Indeed, the proportion of young Scots entering full-time HE doubled in less than a decade, from 19% in 1986-87 to 38% in 1993-94 (SOEID 1998; see chapter 3 below). The 1993-94 entrants correspond to the most recent school leavers covered by this report, but participation has continued to rise since then, to 47% in 1996-97. Within a relatively short period, Scotland has developed a mass HE system. This raises the question of whether increased participation necessarily leads to wider access (McPherson, Munn and Raffe 1991).

Another major change occurred in 1992 when all Scottish HE institutions were brought into a single system, funded by the Scottish Higher Education Funding Council. Five of the former

Central Institutions became universities and the others became Colleges of Higher Education, and several subsequently merged with existing universities. However the binary line was re-drawn rather than abolished. Further Education (FE) colleges play a more important role in HE provision in Scotland than in the rest of the UK, and cater for a third of full-time undergraduate students and a majority of part-time students. Most of these are studying for Higher National Certificates and Diplomas (HNC/Ds) or other advanced courses below degree level. Participation rose even faster in FE colleges than in universities in the early 1990s, possibly encouraged by the reform of HNC/D provision which began in 1989 and by the development of the Scottish Credit Accumulation and Transfer (SCOTCAT) scheme. Most HNC/Ds now give credit towards first degrees, and in 1994 more than half of diplomates from FE colleges, usually with HNC/Ds, went on to further study at an HE institution (NCIHE 1997b, p.14).

In 1997 the National Committee of Inquiry into Higher Education and its Scottish sub-committee published the Dearing and Garrick Reports respectively (NCIHE 1997a, 1997b). One of the main issues addressed by the reports was the funding of HE, and following their publication the government announced that full-time students would be charged an annual £1000 fee from 1998. Students from low-income families were exempted, in the hope that fees would not restrict access. Another prominent theme of both reports was the need to expand participation and to broaden access for under-represented groups. The Garrick committee noted that participation was higher in Scotland than in the rest of the UK and that Scotland 'has had more success ... at attracting students from social classes IIIM, IV and V' (p.12). It attributed this in part to the 'strong role' played by the FE sector. However it felt that 'more can still be achieved' to widen access (p.31). The Garrick committee's analysis has since been challenged by Osborne (1999), who compared students aged 17-21 from each home country accepted by HE institutions in that country in 1997. When the composition of the population is taken into account, the representation of working-class students in Scottish HE was similar to England and below that in Wales and Northern Ireland. However Osborne's data did not cover FE colleges, which account for a larger proportion of Scottish HE. In 1998 the government's Green Paper *Opportunity Scotland* stated that 'the Government's top priority for higher education is to achieve wider access, while maintaining high standards' (Scottish Office 1998, para 2.37). It also announced funding to support an additional 40,000 students in FE colleges and 2,000 students in HE institutions by 2001/2002 (para 6.19).

An issue of specific concern to the Garrick report was the need for effective articulation between upper-secondary education and HE, especially in the context of the Higher Still reforms (Scottish Office 1994). Higher Still was the government's response to the Howie Report on Upper Secondary Education in 1992 (SOED 1992). One of the key issues in the Howie debates had been the value of an S5 exit point from which students could enter HE (McPherson 1992). Howie's own proposals would have removed such an exit point; Higher

Still's more flexible proposals preserve it, but there has been a debate about the roles of S5 and S6 as a preparation for HE, and the impact of Higher Still on these roles.

Research questions

The key issues in HE policy debates have thus included participation, wider access, the role of sub-degree provision and the articulation with secondary education. These are among the main themes of our report, which seeks to illuminate them in three main ways. First, we map these issues as at 1993, the most recent year for which survey data are available for this purpose. We describe the current level of participation in HE and flows into HE among school leavers from different social backgrounds and from different levels and types of school education. Second, we place these patterns in historical context, by presenting data on earlier years. This enables us to observe the progress of expansion and to understand some of its wider implications, for example to examine whether higher participation has resulted in wider access. Third, we go beyond a descriptive account of the correlates of HE entry, and model the processes which lead to entry to HE in order to understand how inequalities in access may arise.

Specifically, we address the following questions, which are the main subjects of chapters 2 to 6 respectively:

- What are the social and educational backgrounds of school-leaver entrants to HE and how have these changed since the end of the 1970s? Has expansion contributed to a broadening of access? Have the routes from secondary school to HE changed?
- What are the relative chances of school leavers from different educational and social backgrounds entering HE, and how have these changed? Have inequalities tended to increase or to decline? Has participation expanded within categories of school leavers - for example among middle-class leavers - or does the growth in participation simply reflect compositional change among school leavers?
- Do different types of students enter degree courses compared with advanced courses such as HNC/Ds, and have these differences changed? How have the different types of courses contributed to broadening access?
- What is the separate influence of different educational and social background factors in determining entrance to HE? In particular, do social background factors determine entry to HE over and above the effect of school qualifications? Do advanced courses widen access to HE as a whole?
- What is the pattern of applications to HE among Scottish school leavers, and what is the success rate of these applications? How do applications to degree and advanced courses differ? Are inequalities in access a result of lower application rates among the under-represented groups or of lower success rates among those who apply?

Definition of 'entrants to HE'

The report is based on leavers from Scottish secondary schools. It includes those who leave Scotland to study but excludes students at Scottish institutions from outwith Scotland, who

comprised 23% of full-time undergraduates in 1994-95. It covers only school-leaver entrants to HE: that is, those who left school and started HE in the same year. They are sometimes referred to as 'direct entrants' in the report.

We define 'entrants to HE' to include everyone who had started a degree or advanced level (sub-degree) course, whether or not they were still doing it at the time of the survey. In addition we included a small number of leavers whose course level was uncertain or apparently 'non-advanced', but who had reported that they had commenced studies at a pre-1992 university. Advanced courses included HNC/D. RGN qualifications were deemed equivalent to HNC before 1993 and to HND from 1993 onwards; we have therefore classified them as advanced courses for all years. SEN qualifications are classified as non-advanced (and therefore not HE) in all years.

The Scottish School Leavers' Survey

The SSLS was conducted every two years between 1976 and 1990 by the CES, in partnership with the Scottish Office, the Economic and Social Research Council (ESRC, formerly SSRC), and other sponsors. Since 1992 it has been carried out by Social and Community Planning Research (SCPR), funded by the SOEID with additional support in 1993 from Strathclyde Regional Council (Lynn 1995).

Each survey was conducted by post, using a questionnaire of up to 16 pages. Most surveys covered a 10% sample of school leavers from all secondary schools, except special schools, in Scotland. (The 1978 and 1980 surveys involved larger samples, from which 10% subsamples have been used in the dataset used here). Response rates to all surveys were generally high: between 70% and 80%, except in 1990 when the response rate was 56%. Each survey was carried out in the spring following the session in which the young people left school. For clarity, years quoted in this report refer to the year of leaving school, and not the year of the survey.

The most recent SSLS data that could be used for this research came from the survey of 1993 leavers carried out in 1994 by SCPR. Due to limitations with the data on HE for 1994 leavers, it was not possible to include them in the analysis. We also use data from the surveys of 1978 - 1990, from the Trends dataset held at CES. Table 1.1 shows achieved sample sizes for each survey used.

Table 1.1: Unweighted Bases

	1978	1980	1982	1984	1986	1988	1990	1993
Sample sizes	5948	5550	7047	6400	5751	4928	3586	3469

Data on curriculum and qualifications

The 1993 leavers dataset provided only limited information on Standard Grades and Highers attained and no information on subjects studied, grades or qualifications attempted while at school. With additional support from the SOEID we linked SEB data with the 1993 leavers

dataset. This provided much more detailed information on qualifications attempted and gained in each school session, on grades of pass and on subjects. This information will also be used in later reports in this series.

Weighting

Each survey used birthdate sampling to construct a representative sample of school-leavers. However, it is likely that non-response introduced bias into the achieved samples, since some groups, such as the poorly qualified, were less likely than others to respond to the questionnaire. Non-response bias was therefore corrected using weighting factors based on sex and qualifications. For full details of the weighting classes for the 1993 leavers' dataset see Lynn (1996).

A note on tables and figures

All tables and figures in this report refer to percentages, except for tables reporting bases, which are labelled as such. Percentages have been rounded to the nearest whole figure; this means that some columns or rows may not sum to 100%. All percentages cited in the report are based on weighted data, while all bases are reported unweighted. Unweighted bases show the actual sample sizes on which a percentage estimate is based, and thus give a more realistic idea of the reliability of each estimate.

Structure of the Report

The next three chapters of this report describe factors associated with entry to HE in 1993, and trends since 1978. Their focus is descriptive: they do not attempt to model or explain entry to HE, and since they examine a number of factors in turn they inevitably contain substantial detail. Chapter 2 focuses on the characteristics of school-leaver entrants to HE and how these changed over time. Factors under examination include gender, qualifications, stage of leaving school and socio-economic background.

Chapter 3 looks at some of these factors again from a different perspective. It addresses the question: what proportions of leavers from different groups entered HE? While chapter 2 provided a profile of entrants, this chapter starts with all leavers and compares rates of entrance amongst different groups. Additional factors such as family composition, parental interest in schooling, truancy and attitudes towards school are also examined to determine their relationship with entrance to HE.

Chapter 4 compares the two main types of undergraduate courses, advanced and degree courses respectively. It compares rates of entry to these two sectors and examines the differences between those entering different types of HE course.

In chapters 5 and 6 our focus shifts from the descriptive to the explanatory. Chapter 5 looks at the factors predicting entrance to HE. Factors such as qualifications, sex, stage of leaving school, social class, parental education and type of school are examined to determine their

relationships to entrance to HE, to each other and their relative importance in predicting entrance to HE.

There are more applicants than entrants to HE and chapter 6 explores whether there are differences in the characteristics of applicants compared with the profile of those who actually start HE courses.

We discuss the issues raised by our analysis at the end of each chapter. In chapter 7 we pull some of the study's findings together to address the broader issues for policy and for future research.

Chapter 2

The characteristics of school-leaver entrants to HE

In this chapter we describe the characteristics of school-leaver entrants to HE in 1993 and, where data are available, explore how these characteristics have changed during the period since 1978. We address the following questions.

- What was the balance of males and females amongst entrants?
- What proportions of entrants had left school from S5 and S6?
- What level of qualifications did entrants have?
- Were there differences in the qualifications of male and female entrants?
- Were there differences in the qualifications of entrants from S5 and S6?
- From which socio-economic backgrounds had entrants come?

The chapter refers to all direct entrants to HE, including those starting degrees and advanced courses and those starting full- and part-time courses. More detailed information on the differences between entrants starting different kinds of courses is available in Chapter 4.

Table 2.1 shows the number of sample members who had entered HE, together with total achieved sample size in each year. These figures form the bases for all tables and figures in this chapter unless otherwise specified.

Table 2.1: Bases (unweighted)

Year of entry	1978	1980	1982	1984	1986	1988	1990	1993
Total entrants	984	1045	1492	1200	1164	1154	1171	1300
Total sample	5948	5550	7047	6400	5751	4928	3586	3469

Expansion in HE

HE has been expanding since the late 1980s; this expansion was particularly rapid during the early 1990s. While expansion meant that more people from all age groups entered HE in 1993 (SOEID, 1995), direct entrants from school still constituted almost half of all entrants in that year (48%) (Paterson 1997). The first row of Table 2.2 shows the rising proportions of school leavers entering HE, estimated from the SSLS; the second row shows the Scottish Office's estimates of the Age Participation Index (API), the proportion of young Scots entering full-time HE (Scottish Office 1998).

Table 2.2: Participation rates among school leavers (SSLS estimates) and young Scots (Age Participation Index)

	1978	1980	1982	1984	1986	1988	1990	1993	1996
SSLS	14	15	20	16	17	21	22	33	n/a
API					19	21	26	38	47

Allowing for sampling fluctuations which affect the SSLS estimates the two sources tell a similar story. The API estimates are higher because they include all people who entered HE before the age of 21, not only direct entrants from school. On the other hand the survey estimates include the small number of part-time entrants, who typically comprise between 1% and 2% of school leavers in each year. Participation rates rose slowly and unevenly up to 1986 and then began to rise more rapidly, with a particularly sharp increase between 1990 and 1993. The API estimates show that this faster rate of increase was sustained over the next three years to 1996.

Gender

There was an approximate balance of male and female entrants in 1993 and in most of the preceding years. There were small imbalances in some years, but in general the proportions of males and females were fairly equal. In this respect the survey data do not reflect the trends in the API which shows females overtaking males in 1989 (SO 1998 Table 10). However for most of the period the gender difference in the API was too small to be detected in the survey estimates (a mere 1.5 percentage points in 1993). The gender difference in the API only became substantial in the years after 1993, for which survey data are not yet available. By 1996 the API for young women was 12 percentage points higher than for young men (53% against 41%); this difference is amplified, but not fully explained, by the inclusion of nursing students in the figures for the first time. However females also have substantially higher success rates at Highers, so this does not necessarily mean that qualified females have a better chance of entering HE than qualified males. We explore this further in chapter 3 below.

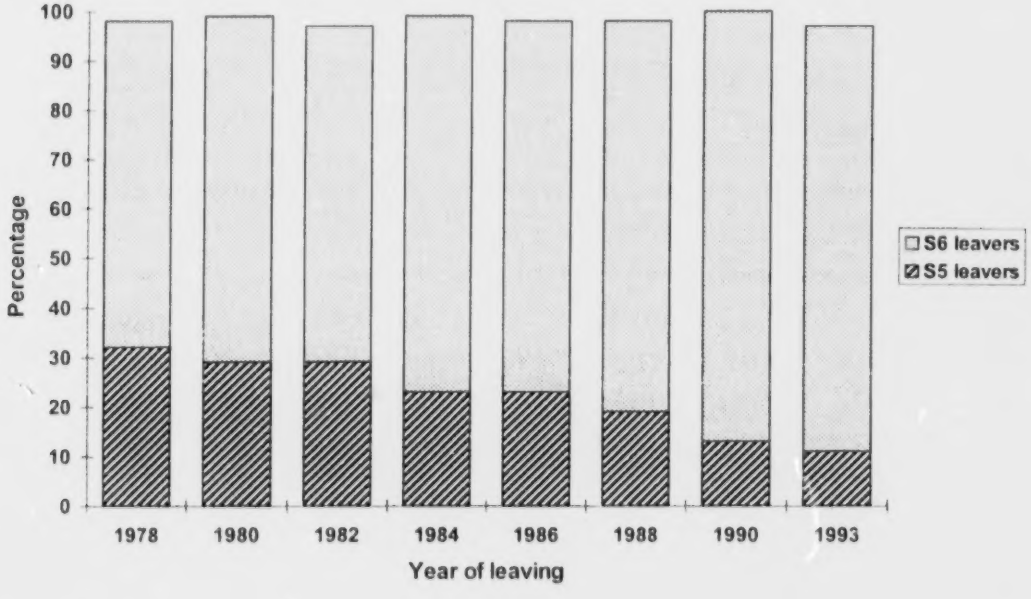

Figure 2.1: Percentages of entrants who had left school from S5 and S6

Entrants from S5 and S6

Figure 2.1 shows that over the period there was an increase in the proportions of entrants who had entered HE from S6 and a decrease in the proportions of entrants who had entered from S5. In most years there was also a small percentage (between 0 and 3%) who stated that they had entered from earlier school stages. It is likely that this small group had not actually entered HE, as they reported in the survey questionnaire, but had entered pathways *leading* to HE.

Qualifications

In 1993 almost three-quarters of direct entrants to HE had 3 or more Highers, and almost half had 5 or more. Approximately 7% were reported as having no Highers. Some of those with no Highers may have had A levels, but information was not available to verify this. We know from other sources that only 1% of Scottish school-leaver entrants to HE had A levels, and a further 1% had both Highers and A levels (NCIHE 1998b, p.122: 1994 figures). Table 2.3 shows that across all years the large majority of entrants had 3 or more Highers, but that this majority decreased in size during the late 1980s and early 1990s. While this apparently suggests that standards for entry to HE were falling, we shall see in chapter 4 that the qualifications of entrants to degrees remained stable over time, and that the decline in entrants with 3 or more Highers occurred among entrants to advanced courses such as HNC/Ds. The proportion of entrants to all HE courses with 5 or more Highers fluctuated over the period, with a high of 57% in 1984 and a low of 47% in 1993.

Table 2.3: Percentage of entrants with 3 or more Highers

1978	1980	1982	1984	1986	1988	1990	1993
90	88	80	91	86	81	82	73

Grades

The average Highers grade attained by entrants fell from 1.71 in 1980 to 1.62 in 1993 (calculated on the following basis: A = 3, B = 2 and C = 1). Thirty-nine percent of entrants in 1993 had attained one or more Highers at grade A, compared with 45% in 1980. However, as in the case of the number of Highers we shall see in chapter 4 that this trend affected advanced courses and not degree courses.

Other qualifications

Almost one-third of entrants in 1993 (32%) had one or more CSYS pass, compared with 25% in 1980. A very small percentage of non-entrants (2%) had attained CSYS in 1993. The likelihood that a young person had CSYS qualifications increased with the number of Highers attained.

Forty-four percent of entrants had also attained SCOTVEC modules, most of them gaining one or two. This was similar to the proportion of non-entrants who had gained modules (50%). Entrants with fewer than 3 Highers were more likely than entrants with 3 or more

Highers to have attained at least one SCOTVEC module. However, Table 2.4 shows that almost half of those with fewer than 3 Highers attained no modules, and the majority of those that did so attained only one or two. Thus for the majority of those with fewer than 3 Highers, their participation in HE cannot be explained by their attainment of modules as an alternative to Highers.

Table 2.4: Percentage of entrants with less than 3 Highers and 3 or more Highers attaining SCOTVEC modules (1993)

No of modules	<3 Highers *(N = 253)*	3+ Highers *(N = 997)*
0	48	59
1-2	28	26
3-5	13	14
6+	11	2

Qualifications of male and female entrants

There were no significant differences between male and female entrants in the number of Highers or average grade attained either in 1980 or in 1993.

Qualifications of those entering from S5 and S6

The average qualification levels of S6 leavers who entered HE did not change between 1980 and 1993. In both years they had an average of 4.4 Highers and an average grade of 1.7 (Table 2.5). In contrast, the average qualifications of S5 entrants fell over the period. Their average number of Highers fell from 3.9 to 2.6 and their average grade fell from 1.8 to 1.4. The proportion of S5 entrants with fewer than 3 Highers rose from 16% in 1980 to 48% in 1993 (table not shown). There were however differences between those entering degree courses and those entering advanced courses, which will be discussed in chapter 4.

As a result, whereas in 1980 the qualifications of S5 entrants were only slightly lower than those of S6 entrants, by 1993 the gap had widened substantially.

Table 2.5: Attainment of S5 and S6 entrants (bases in Appendix 2)

		1980	1993	
Average no of Highers	S5 entrants	3.9	2.6	p<0.001*
	S6 entrants	4.4	4.4	NS
		p<0.001	p<0.001	
	S6 entrants (at end of S5)	3.2	2.9	p<0.001
Average Highers grade	S5 entrants	1.8	1.4	p<0.001
	S6 entrants	1.7	1.7	NS
		NS	p<0.001	
	S6 entrants (at end of S5)	1.6	1.5	NS

* *Probability that this difference occurred by chance, using t tests.*

We gain further insight into these trends by looking at the S6 entrants' attainment at the end of S5 (Table 2.5). In 1980 S6 entrants had lower qualifications from S5 than the S5 entrants, although they used their extra year to make up the difference and achieve higher qualifications. In 1993 the S6 entrants had higher S5 qualifications than the S5 entrants, and they used the extra year to increase the gap.

Subjects

Table 2.6 shows the proportions of entrants gaining Highers or CSYS in different subjects in 1993. Seventy-five percent of entrants had Highers or CSYS in English, 56% in maths, 61% in science subjects, and 54% in social subjects.

Table 2.6: Attainment of entrants in different subjects 1993

	Percent with Highers but no CSYS in subject	Percent with CSYS in subject
English	69	6
Maths	44	12
Science	48	13
Social subjects	47	7
Language	17	3
Technical subjects	20	<1
Creative subjects	15	3
RE	2	0
PE	0	0

Note: See Appendix 1 for details of how individual subjects have been classified

More female entrants than males had Higher/CSYS passes in languages and in creative subjects and more males than females had Higher/CSYS passes in maths. In all other subjects there were no significant differences in performance of male and female entrants.

Socio-economic status of entrants

Classification of father's occupation

In 1993, about twice as many entrants had 'middle-class' fathers in non-manual occupations as had 'working-class' fathers in manual occupations (59%: 29%). Table 2.7 shows that this distribution has remained fairly stable over time. The proportion of entrants from manual (working-class) backgrounds increased up to 1982, declined during the mid 1980s and then rose again in the late 1980s and early 1990s. Since the latest trend coincides with the main increase in participation this may suggest that expansion of HE has encouraged wider as well as deeper access. However in none of the years covered by the table does the social-class distribution of entrants match the distribution among school leavers as a whole. For example, in 1993 37% of school leavers had fathers in non-manual occupations and 40% had fathers in manual occupations. Thus middle-class children were over-represented amongst entrants to

HE and working-class children were under-represented. This disparity will be discussed further in the next chapter.

Figures based on mother's occupation are not displayed here because data are not available for all years and because the Registrar-General's schema has been shown to be problematic for classifying women's occupations (eg Murgatroyd, 1982; Dale, Gilbert and Arber, 1985).

Table 2.7: Classification of entrants by father's occupation (Registrar-General's Classification)

	1978	1980	1982	1984	1986	1988	1990	1993
Non-manual (I, II, IIIN)	62	63	56	60	64	65	64	59
Manual (IIIM, IV, V)	27	29	32	29	24	24	26	29
No info/occupation	10	8	12	11	12	14	10	12

Parental education

In 1993, about half of all entrants had mothers educated to 16 years or less and about one-third had mothers who were educated to 17 years or beyond. The pattern was similar for father's education.

Tables 2.8 and 2.9 show the educational levels of the parents of entrants across years. The patterns are similar for mother's and father's education. There was a decrease in the proportion of entrants with mothers educated to 16 years or less and a corresponding increase in the proportions with mothers educated to 17 years or beyond. While this can be explained to some extent by a general increase in levels of parental education during the period, leavers with parents educated to 16 years or less continued to be substantially under-represented in HE. For example in 1993 leavers with mothers educated to 16 years or less comprised 62% of all school leavers compared with 51% of HE entrants. The relationship between parental education and HE will be discussed further in the next chapter.

Table 2.8: Entrants with mothers educated to different levels

	1978	1980	1982	1984	1986	1988	1990	1993
16 years or less	63	63	66	60	58	58	53	51
17 years +	29*	24	25	28	30	31	32	36

** The remainder in each year up to 100% were unclassified*

Table 2.9: Entrants with fathers educated to different levels

	1978	1980	1982	1984	1986	1988	1990	1993
16 years or less	60	62	62	58	57	54	51	53
17 years +	31*	24	23	28	29	34	32	31

** The remainder in each year up to 100% were unclassified*

Summary

- The proportion of school-leavers who entered HE increased from 14% in 1978 to 33% in 1993. Much of this increase took place during the late 1980s and early 1990s.
- The average Highers qualifications of entrants declined over the period, especially between 1984 and 1993, although this occurred only among entrants to advanced courses, not among degree entrants. Some entrants had other qualifications such as SCOTVEC modules, CSYS or A levels. A majority of entrants in 1993 had Higher and/or CSYS passes in English, maths, science and social subjects.
- There was an approximate balance of males and females among entrants in most years. There was no significant difference between the Highers qualifications of male and female entrants.
- The proportion of entrants who had left school after S5 fell from 32% in 1978 to 11% in 1993. Entrants from S5 had lower average qualifications than S6 entrants, and the gap between them widened over the period.
- Children with fathers in non-manual occupations were substantially over-represented among HE entrants compared to their proportion among all school leavers. In 1993 about twice as many entrants had fathers in non-manual occupations as had fathers in manual occupations (59%: 29%). The proportion from manual backgrounds declined in the mid 1980s and then rose again in the late 1980s and early 1990s. The average levels of parental education among HE entrants increased throughout the period.

Discussion

The most significant trend in this chapter, and one which provides the context for the rest of the report, is the expansion of HE. The proportion of school leavers entering HE more than doubled during the period between 1978 and 1993, with a particularly steep increase in the later years. The expansion has continued since 1993. Data from the 1999 SSLS, expected to be available at the end of 1999, will enable this analysis to be updated with information on young people who left school from S5 in 1997 or S6 in 1998.

How has expansion affected the characteristics of entrants? Their average level of Highers qualification has fallen. At first sight this may suggest a decline in standards, but this conclusion must be qualified in two important respects. First, it takes no account of attainment in A levels or SCOTVEC modules; the period of decline in Highers qualifications coincides with the period in which modules became available as an alternative qualification for HE. Nevertheless only a small minority of HE entrants with fewer than 3 Highers had an equivalent number of modules. Second, the change in the average qualifications of entrants was concentrated among those entering advanced courses rather than degree courses, as we shall see in chapter 4.

A further trend has been the declining proportion of entrants from S5. This may be partly explained by the further finding that S5 entrants had lower average qualifications than S6 entrants and that the gap between them increased over time. In the past, many 'high-flying' students with good S5 Higher attainments proceeded directly to university, especially in the

west of Scotland (Robertson, 1990). Our study suggests that such students are now more likely to stay on for a sixth year, and that it is increasingly the less qualified HE entrants who make the transition after S5.

The proportion of males and females remained in approximate balance, although we know from other sources that female participation has risen much faster than male participation since 1993, the last year covered by our SSLS analyses. There was a modest increase in the proportion of HE entrants from working class backgrounds during the period of expansion after 1988. There was also a more continuous increase in levels of parental education. However to understand these trends we need to take account of the changing composition of school leavers with respect to social class and parental education. We do this in the next chapter by comparing trends in the proportions of school leavers from different educational and social backgrounds who enter HE.

Chapter 3

Which school leavers entered HE?

In this chapter we address the question: which school leavers entered HE? While in the previous chapter we looked only at entrants, in this chapter we start with all leavers and look at the proportion who enter HE, comparing rates of entrance among different groups, and where the data are available examining trends over time. We thus address the further question: has the expansion in HE broadened access to all sectors of the population? In addition to the educational and social characteristics examined in the previous chapter we also look at HE entrance in relation to type of school, school region, family composition, parental interest, truancy, and experiences and attitudes towards school.

As in chapter 2, 'entrants to HE' include all those who started degrees or advanced level courses in the year after leaving school, including part-time students. The achieved sample sizes on which the tables in this chapter are based are as follows unless stated otherwise (Table 3.1). Bases for all figures are in Appendix 2.

Table 3.1: Bases

	1978	1980	1982	1984	1986	1988	1990	1993
Sample size (unweighted)	5948	5550	7047	6400	5751	4928	3586	3469

Gender and Attainment

Figure 3.1: Leavers with 3 or more Highers who entered HE

*All years except 1990 significantly different at $p<0.05$ level using chi-square test

In 1993, equal proportions of male and female school leavers entered HE (33%). Since the mid-1980s, however, more females than males have gained 3 or more Highers (31% of females and 28% of males in 1993). This trend has not translated into more females than males entering HE over that period. In most years, among leavers with 3 or more Highers, more males than females entered HE (Figure 3.1).

Stage of leaving school

Figure 3.2: Proportions of S5 and S6 leavers who entered HE

In 1993, 61% of S6 leavers entered HE, compared with only 18% of S5 leavers. Over time, the proportion of leavers entering from S6 has remained fairly stable at about 60%, while the proportion of S5 leavers entering decreased up until 1990, then increased again in 1993 (Figure 3.2). In the previous chapter we saw how the proportion of *entrants* who had left school from S6 increased over time. This apparent anomaly can be explained by the fact that, over the period, more young people stayed on to S6: the proportion of young people leaving from S6 increased from 17% in 1980 to 46% in 1993. This explains how an increasing share of all entrants were S6 leavers, while the proportion of S6 leavers entering HE remained about the same.

Qualifications

Entry to HE was, as expected, strongly associated with Highers qualifications. In 1993 90% of school leavers with 5 or more Highers, 68% of those with 3-4 Highers and 32% of those with 1-2 Highers entered HE. Small percentages of those with no awards or only Standard Grades also reported that they had entered HE. A few of these people may have had A levels or sufficient modules to qualify for HE; others may have entered pathways leading to HE.

The proportion of school leavers with 5 or more Highers who entered HE was already close to 90% in 1978 and it has remained near to this level over the period. While the proportion of entrants among those with 3-4 Highers who entered HE rose moderately between 1978 and 1993, by 8 percentage points, the proportion of entrants among those with 1-2 Highers increased by 21 percentage points in the same period (Figure 3.3). In 1993, 12% of the whole sample attained one or more CSYS, and 87% of these entered HE.

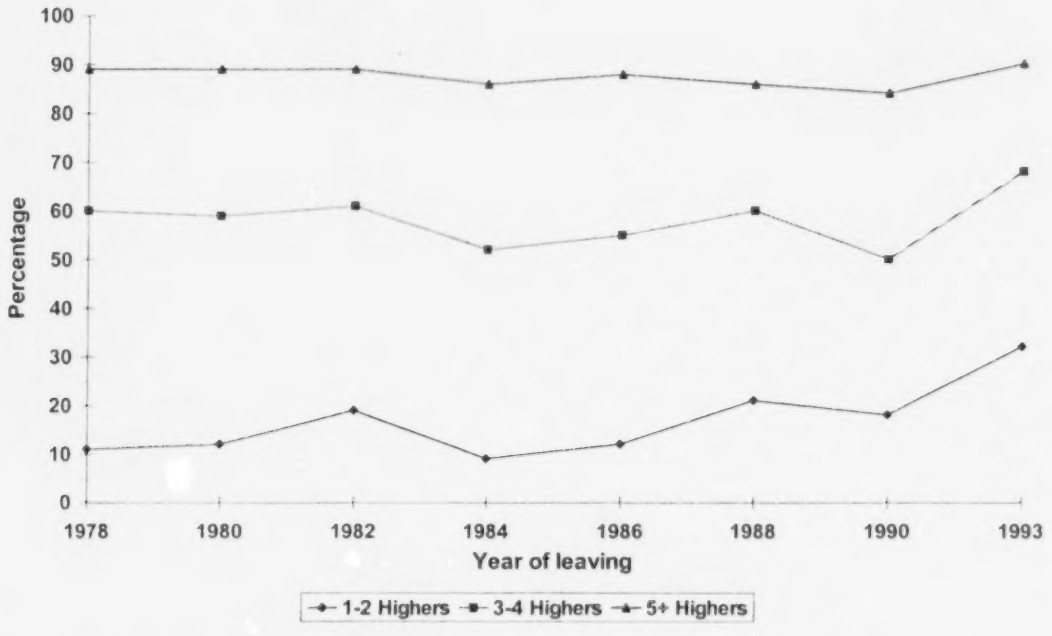

Figure 3.3: Percentage with different levels of attainment who entered HE

Socio-economic status and entrance to HE

Throughout the period from 1978 to 1993 school leavers with fathers in non-manual occupations were far more likely than those with fathers in manual occupations to enter HE (Figure 3.4). While expansion in HE has meant that more young people in both categories entered in 1993 than any year previously, a clear imbalance in entrance from the different groups remained.

There was a similar pattern in respect of parental educational level. Figure 3.5 shows that in 1993, a far greater proportion of leavers with mothers who had been educated beyond compulsory schooling entered HE than among those whose mothers had been educated to 16 years or less. There was an increase in participation in both categories, but a clear gap remained in 1993. The pattern was largely similar for father's educational level.

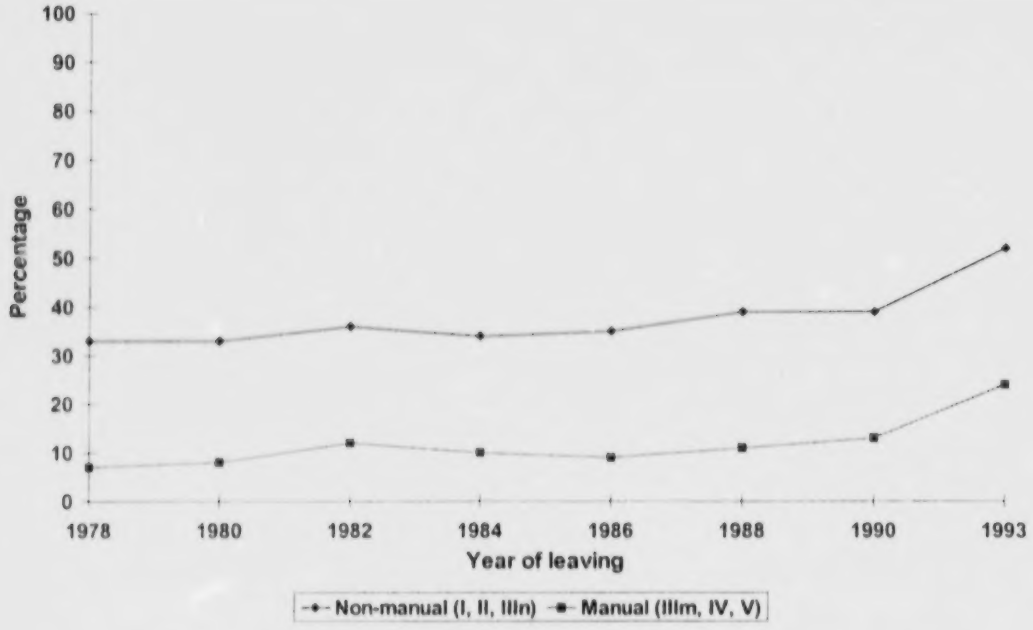

Figure 3.4: Percentage of leavers who entered HE from different social class backgrounds (father's occupation)

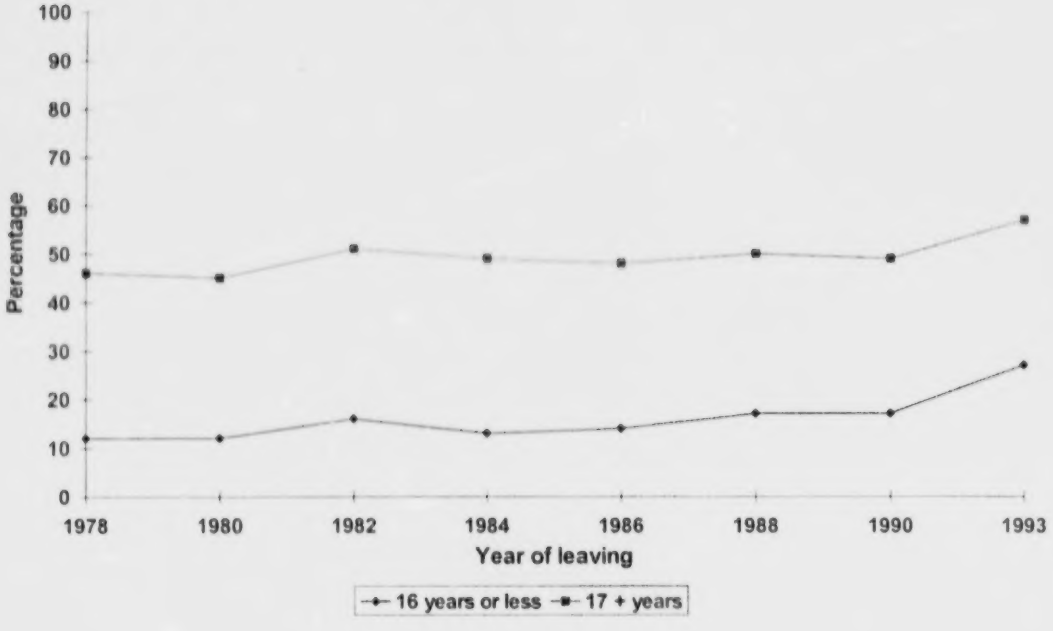

Figure 3.5: Percentage of leavers entering HE, by mother's educational level

We use odd ratios to measure the level of inequality between social classes or other groups in the rate of entry to HE. Odds ratios take account of the relative proportions of each class who do *not* enter HE, as well as the relative proportions who do enter. They thus provide a measure of inequality which attempts to be neutral in respect of the overall increase in school-leaver entrants to HE. (If the numbers of middle-class students entering and not entering HE

are *a* and *b* respectively, and the corresponding numbers of working-class students are *c* and *d* respectively, the odds ratio is the ratio between the two odds, *(a/b)/(c/d) = ad/bc*.) Table 3.2 shows the odds ratios which express inequalities in respect of father's occupation, mother's education and father's education respectively. (The first two of these correspond to Figures 3.4 and 3.5.) Each series shows the level of inequality declining after 1978, rising again to a peak in the mid 1980s and then declining again in the late 1980s and early 1990s. The level of inequality for all three measures was lower in 1993 than in all of the earlier years, and the difference is statistically significant (except in respect of father's education, where the 1993 estimate is significantly lower than all years except 1990). It is possible that the change in survey procedures after 1990 contributed to the observed trend. For example, if social class were measured less reliably in 1993 than in earlier years the observed correlation with HE entry would be weakened, and the data would show a spurious decline in inequality. However the fact that the 1993 estimate continues a trend since 1986 encourages us to conclude that this is a genuine trend and not an artefact of survey techniques.

Social inequalities in entry to HE have therefore declined since the 1970s, and they declined most rapidly during the period of fastest expansion. (Conversely, they rose during the period in the mid 1980s when HE places were not expanding as fast as the number of qualified leavers: see Burnhill, Garner and McPherson (1990).) This is consistent with the analysis by Paterson (1997) who attributes the recent decline in inequalities, not to changing entrance criteria or higher levels of attainment, but to the general expansion in HE and the alternative access schemes available. He asserts that the general expansion has provided more opportunities and therefore raised aspirations particularly amongst previously under-represented groups (see also Paterson 1992).

Table 3.2 Odds ratios: entry to HE by social class (father's occupation) and parental education

	1978	1980	1982	1984	1986	1988	1990	1993
father's occupation (non-manual v manual)	6.4	5.8	4.4	4.8	5.8	4.9	4.3	3.4
mother's education (17+ v. up to 16)	6.6	6.0	5.5	6.4	5.8	4.8	4.7	3.5
father's education (17+ v. up to 16)	7.2	5.9	5.5	6.5	6.8	6.2	4.7	4.0

The social class background and educational level of parents have a strong influence on the attainment of their children (Burnhill, Garner and McPherson 1990). This effect is clearly illustrated in Figures 3.6 and 3.7. Those with fathers in non-manual occupations were more likely to gain 3 or more Highers than those with fathers in manual occupations. Similarly those with more educated mothers were more likely to gain 3 or more Highers than those with less well-educated mothers. (The pattern was broadly similar for father's educational level).

Social class and parental education affect entrance to HE mainly through their influence on qualifications gained. However, social background did also, to a small extent, have an

influence on entrance over and above its influence on qualifications. This relationship will be discussed further in chapter 5.

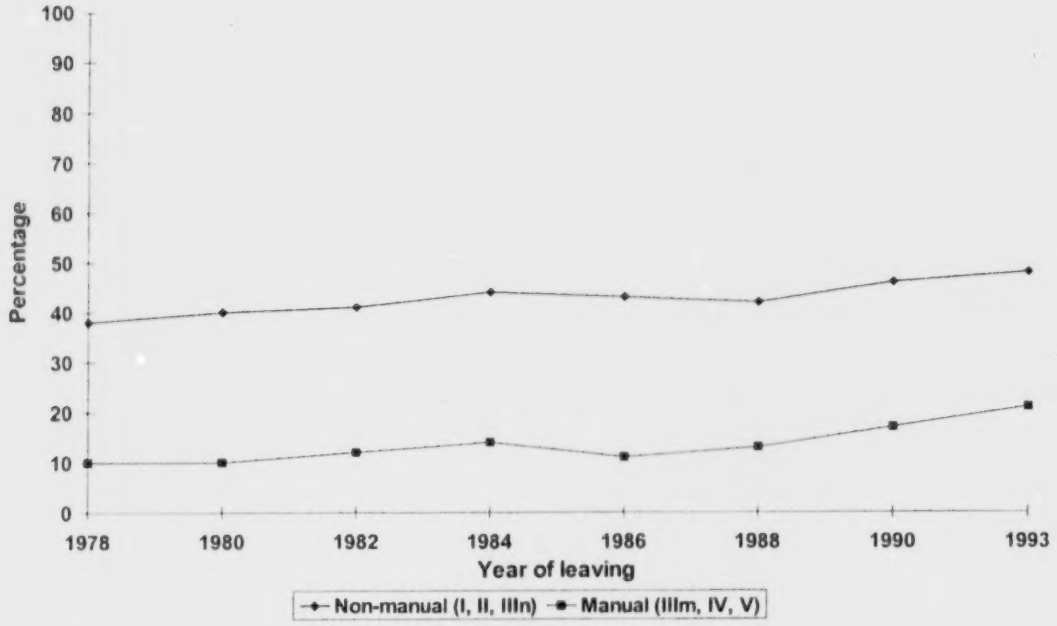

Figure 3.6: Percentage of leavers gaining 3+ Highers, by social class (father's occupation)

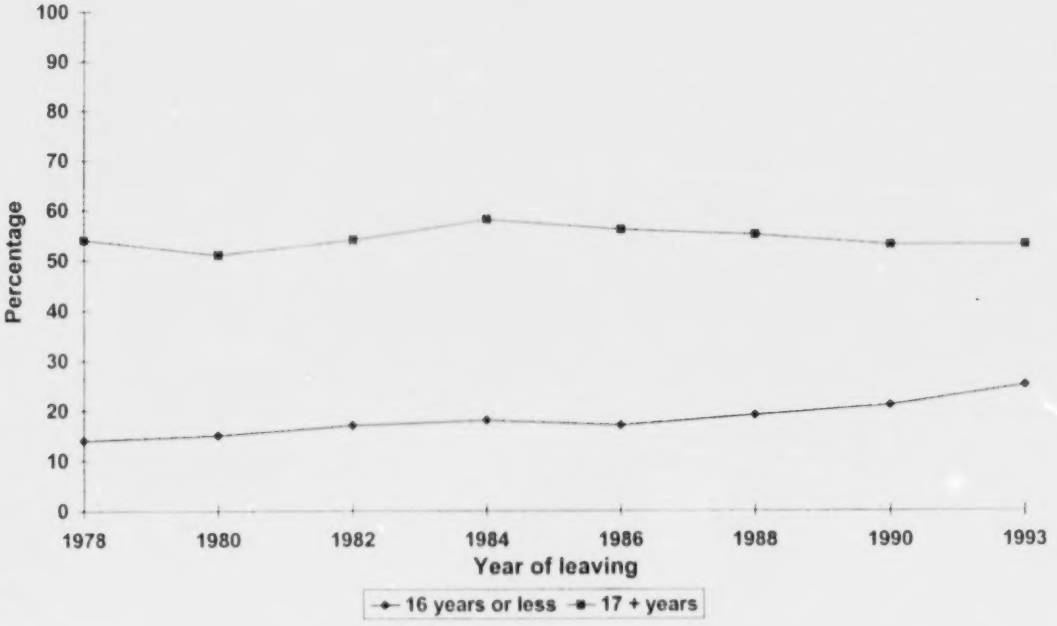

Figure 3.7: Percentage of leavers gaining 3+ Highers, by mother's educational level

Type of school

Far greater proportions of leavers from independent schools than from local authority schools entered HE in 1993. This was true of all years for which data were available (Figure 3.8). Local authority leavers benefited from the expansion in HE, in that the early 1990s saw an increase in their levels of participation. However, the gap between the two types of schools had actually increased between 1984 and 1990.

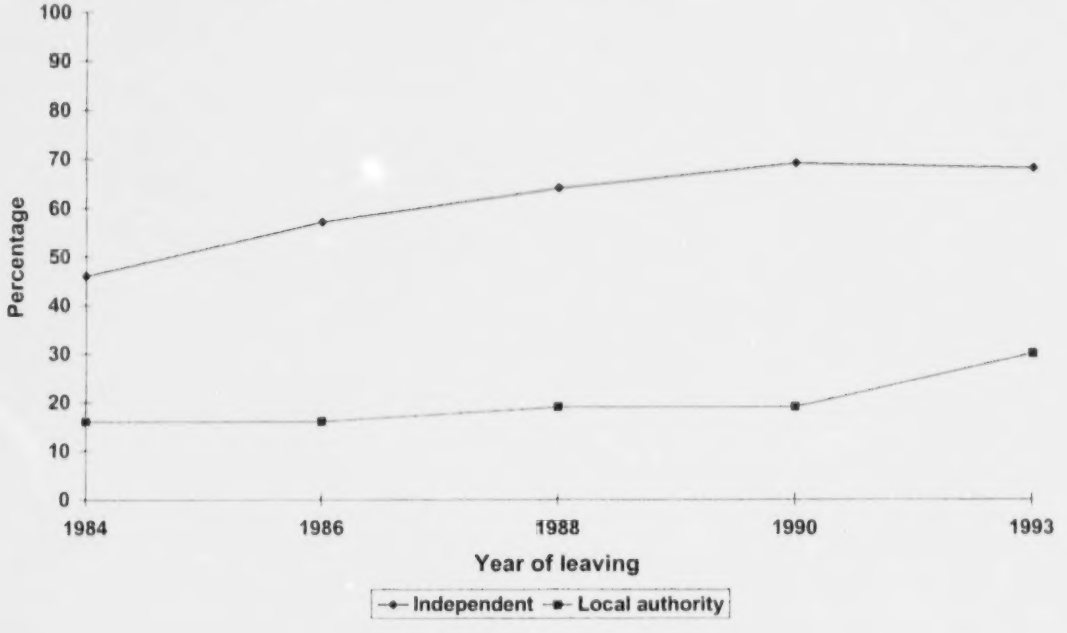

Figure 3.8: Proportions entering HE from different types of school

As with social class and parental education, the different levels of participation of leavers from independent and local authority schools can be explained largely by the generally higher levels of attainment of independent school leavers. In 1993 leavers from independent schools were no more or less likely to enter HE than leavers from local authority schools with the same level of qualifications. We explore this relationship further in chapter 5.

In 1993, those from Catholic schools were no more or less likely to enter HE than those from non-denominational schools.

Region of school

In 1993 there were differences in the proportions of leavers who entered HE from different regions (based on the current education authority of school, with the divisions of Strathclyde Region treated separately; independent and local authority schools are included). Small sample numbers in many regions mean that the figures in Table 3.3 must be treated as a guide to trends rather than precise estimates. They show the proportion of school leavers entering HE ranging from 27% in Grampian to 40% in Renfrew. The average across all regions was 33%. Renfrew, the Borders, Dumfries and Galloway, Ayr and Dumbarton had above average participation rates (37%-40%). Highland, Tayside, Lothian, Central, Glasgow and Lanark

were fairly close to average (30%-34%). Fife and Grampian had below average rates (27%-29%). Sample sizes were too small to report rates in other regions. Rates of entry increased over time in all regions.

The composition of *entrants* from different regions has remained remarkably similar over time with the smallest proportions of entrants in 1993 coming from the Borders (3%) and Dumfries and Galloway (3%) and the largest proportion coming from Lothian (14%), the next largest shares go to Tayside, Glasgow and Lanark (all at 9%).

Table 3.3: Percentages of leavers from different school regions who entered HE (bases in Appendix 2)

	1978	1980	1982	1984	1986	1988	1990	1993
Highland	14	16	20	18	15	21	21	33
Grampian	15	18	19	19	16	21	25	27
Tayside	14	18	24	18	19	26	27	32
Fife	15	18	22	17	13	21	21	29
Lothian	15	15	20	17	18	24	23	30
Borders	-	-	21	18	-	23	-	39
Central	14	17	19	16	21	18	23	34
Dumfries and Galloway	12	15	20	15	19	23	25	37
Ayr	14	13	18	16	18	17	17	37
Dumbarton	19	17	18	17	20	25	23	38
Glasgow	12	12	17	14	14	17	16	31
Lanark	15	14	19	14	15	18	17	32
Renfrew	17	21	21	19	22	24	28	40

Robertson (1990), analysing data up to 1986, reported that school leavers in Strathclyde were more likely to enter HE from S5 than leavers in the rest of Scotland. This trend continued until 1988, when 20% of S5 leavers from Strathclyde entered compared with 13% from the rest of Scotland. However, this trend did not continue in subsequent years.

In 1993, an additional measure of population size was used to look at whether leavers from urban areas were more or less likely to enter HE than those from rural areas. There were no significant differences in the proportions entering HE from urban or rural regions.

Family composition and housing tenure

In 1993 school leavers who had stayed with two adults during S4 (at least one of whom was a natural parent) were more likely than any other group to have entered HE. The proportion of those entering HE who had stayed with a lone parent in S4 was significantly below average. Figure 3.9 shows that, while participation amongst those who had stayed with two adults remained fairly close to average across all years, rates for those who had stayed with a lone parent remained below average.

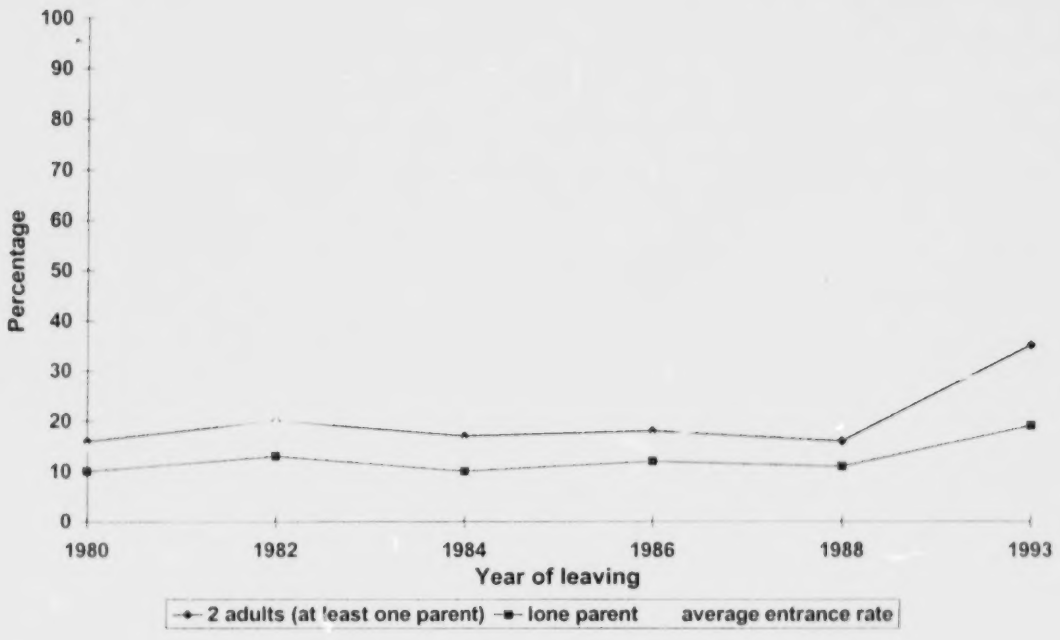

Figure 3.9: Family composition in S4 and entrance to HE

In 1993 those whose parents had owned their own homes were more likely to have entered HE (41% entered) than those whose parents had rented. Among the latter group, those whose parents had rented from the Council, Scottish Homes or the New Town Development Corporation had lower participation rates (14%) than those whose parents had rented privately (30%).

Parental interest in child's education

Leavers whose parents had shown no interest in their schooling were less likely to enter HE than those whose parents had shown some interest. Table 3.4 illustrates this for 1993. Entrance rates amongst those whose parents had shown interest were about average, while those whose parents had shown no interest were below average. However, those indicating no parental interest were in the minority in the sample as a whole (between 3% and 15% answered 'never').

Table 3.4: Percent who entered HE by level of parental interest in schooling in 1993 (bases in Appendix 2)

How often did your parents ...	% of those who said *"sometimes/often"* who entered HE	% of those who said *"never"* who entered HE
...discuss the day's events at school with you	35	18
...encourage you in your own plans and hopes	34	17
...urge you to do your best at school	33	17
...discuss your school reports with you	34	18

Truancy and entrance to HE

In 1993, those who had never truanted from school were more likely than former truants to enter HE. The higher the level of truanting, the lower the likelihood of entering HE (Table 3.5). This was also true of all preceding years.

Table 3.5: Percent who entered HE by frequency of truanting in 1993 (bases in Appendix 2)

	% who entered HE
Never	46
Lesson here and there	33
Day here and there	21
Several days at a time	6
Weeks at a time	2

Experiences and attitudes towards school

Table 3.6: Experiences and attitudes towards school and entrance to HE (1993) (bases in Appendix 2)

	% of those agreeing who entered HE	% of those disagreeing who entered HE
School has helped to give me confidence to make decisions	36	28
School has been a waste of time	9	35
School has done very little to prepare me for life	26	37
School has taught me things which would be useful in a job	33	31
My school had a wide choice of after-school activities	38	29
My school dealt well with any bullying that went on	37	28
There was vandalism at my school during the school day	28	39
If I had a problem there was always a teacher I could talk to	36	27
Theft among pupils was common at my school	21	37
Pupils respected the teachers	47	24
My school was well-thought of in the local community	37	23
School work was worth doing	36	18
My teachers didn't care about me	17	36
There were too many troublemakers in my classes	24	40
My teachers helped me to do my best	36	25
Teachers could not keep order in class	20	39
My friends took school seriously	43	22
Discipline was fair	37	20
Teachers listened to my ideas and views	36	27
Teachers often gave me homework	36	19
Teachers made sure I did homework they set	37	25

Those who had had positive experiences of school were more likely to go into HE than those who had had negative experiences. Similarly those with positive attitudes towards school were more likely to enter than those with negative attitudes (Table 3.6). It must be remembered that these attitudes were expressed retrospectively. It is perhaps not too surprising that those who looked back on school most favourably were those who had done well enough there to get into HE. There was no significant difference in entrance rates amongst those who had agreed or disagreed with the statement: 'School has taught me things which would be useful in a job'. This may reflect a tendency for students hoping to enter HE to take fewer vocationally relevant subjects.

Summary

- Entry to HE was strongly correlated with Highers qualifications. Entry rates rose fastest among school leavers with 1-2 Highers, followed by school leavers with 3-4 Highers. They were already very high among school leavers with 5 or more Highers.
- Despite the large increase in numbers of S6 leavers the proportion of S6 leavers entering HE remained relatively stable. The proportion of S5 leavers entering HE has declined since 1978 although it rose again slightly in the early 1990s.
- Females achieved higher qualifications at school, but among qualified school leavers with 3 or more Highers more males than females entered HE.
- Inequalities in entry to HE in relation to social class and parental education narrowed significantly in the late 1980s and early 1990s, although a large gap remains.
- Rates of entry to HE were higher among school leavers from independent schools, among those from two-parent families or home-owning households, among those whose parents had taken an active interest in their education, among those who had never played truant, and among those who expressed favourable attitudes to school.

Discussion

HE has not merely expanded in line with the changing social and educational composition of school leavers; participation in HE has expanded *within* the categories of most of the variables we have examined. For example, although participation among the highest qualified school leavers (with 5 or more Highers) was already (at around 90%) near its ceiling at the end of the 1970s, participation grew among school leavers with 3 or 4 Highers and it grew most of all among those with only 1 or 2 Highers. This may indicate that it has become 'easier' to enter HE, but as we shall see in chapter 4 we need to distinguish between degree and advanced courses when describing trends.

The main exception to the tendency for participation to increase within categories of school leavers is in respect of stage of leaving. The rate of entry to HE among S6 leavers remained relatively stable, and among S5 leavers it actually declined over much of the period. Staying-on rates to S6 have also grown very rapidly, and despite the huge expansion of S6 it has retained its character as primarily a pre-HE year. This has implications for Higher Still which

aims to make S5 and S6 a more relevant preparation for a whole range of destinations, and not only for HE.

Our research finds significant evidence of a narrowing of inequalities in entry to HE with respect to social class and parental education. It also suggests that this narrowing is connected with the general expansion of HE. Nevertheless the gap between social classes remains wide, and it is not all attributable to differences in Higher qualifications. Among school leavers with 3 or more Highers, there was still a class gap in entrance to HE in 1993; there was also a gender gap, showing that female school leavers did not convert their better Highers attainments into a correspondingly higher rate of HE. The 1999 SSLS will reveal whether there have been further trends in social and gender inequalities since 1993.

In this chapter we have identified a wide range of social background factors associated with entry to HE, but many of these factors may not influence entry directly. In some cases cause and effect may run in either direction: for example, parental interest may be as much a consequence as a cause of high attainment and an aspiration to enter HE. Most of the characteristics we have examined are correlated with each other, and they may not all be independently associated with entry to HE. In chapter 5 we will move beyond a description of entry rates in order to identify factors which directly influence entry to HE. Before that, in chapter 4, we complete our descriptive account of trends in participation by showing how these differ between degree and advanced courses.

Chapter 4

Entrance to degree and advanced courses

While chapters 2 and 3 looked at the characteristics of all direct entrants to higher education, this chapter will examine the differences between those entering degree courses and those entering advanced courses such as HNC/Ds. The bases for all tables in this chapter are as follows (Table 4.1) unless otherwise stated. Data on course level were not available for 1986, and this year is therefore not included in tables.

Table 4.1: Bases (unweighted)

	1978	1980	1982	1984	1988	1990	1993
Degree entrants	676	777	1054	874	863	906	954
Advanced course entrants	308	267	434	320	288	260	346
Total entrants	984	1045*	1492	1200	1154	1171	1300

* *There were a small number of unclassified cases in some years and this is why columns sometimes do not add up to the total*

Trends in entry to degree and advanced courses

Table 4.2 shows that the proportion of leavers entering both degrees and advanced courses has increased over time. In all years, more leavers entered degrees than advanced courses. In 1993 72% of all entrants started degrees compared with 28% who started advanced courses. This ratio has remained fairly stable since 1980.

Table 4.2: Percentage of school-leavers entering different types of HE course

	1978	1980	1982	1984	1988	1990	1993
Degree	10	11	14	12	16	16	23
Advanced	5	4	6	4	5	6	9
Sample size	5948	5550	7047	6400	4928	3586	3469

There is a close connection between the level of course and the type of institution. The data record that a majority of those starting degrees (89%) went to universities or other HE institutions in 1993, while only 4% went to FE colleges. The majority of those starting advanced courses (58%) went to FE colleges. A comparison of HE and FE institutions would therefore yield similar conclusions to those reported below. In this chapter we focus on level of course rather than institution, partly because it is not possible to compare different types of HE institutions with the available data. We had hoped to compare the pre-1992 universities with the former Central Institutions (CIs) which had joined the universities in a unified HE funding system in 1992 (the five largest became universities in their own right). We hoped to find out whether this change, together with the general growth in participation, had an effect on the relative flows of different kinds of school leavers into the former CIs compared with the pre-1992 universities. However, a coding error in the 1993 dataset supplied to us meant that it was not possible to distinguish accurately former CIs from pre-1992 universities.

Gender

In chapter 2 we reported that in most years there had been a balance of male and female entrants to HE. In 1988 and in 1990 more females than males entered advanced courses (61% of advanced entrants were female in both years). Amongst degree entrants, males outnumbered females in 1978 and 1980 and there was a balance of males and females from 1982 onwards. In 1993 there was a balance of males and females amongst entrants to both types of course.

Stage of leaving school

In chapter 3 we showed that about 60% of S6 leavers had entered HE in each year over the period 1978-1993. Most S6 entrants started degree courses (between 75% and 79% of S6 entrants in all the years studied). Between 1980 and 1990 the majority of S5 entrants to HE started degree courses (between 63% and 69%). However, in 1993 this trend reversed, with a slim majority (56%) of S5 entrants starting advanced courses.

Qualifications

In chapter 2 we reported that almost three-quarters of HE entrants had 3 or more Highers in 1993, and that the proportion of entrants with fewer than 3 Highers had increased between 1984 and 1993. However the trend was different for entrants to degree courses and advanced courses respectively.

In all years, the majority of entrants to degree courses had 5 or more Highers (between 62% and 72%). Very few (1% - 6%) had only 1 or 2 Highers (see Table 4.3). No information was available on A levels gained. Those who entered degree courses in 1993 were slightly less qualified than entrants in earlier years, but there is no clear overall trend.

Table 4.3: The qualifications of degree entrants

	1978	1980	1982	1984	1988	1990	1993
1-2 Highers	1	1	6	2	6	5	4
3-4 Highers	29	30	27	25	29	20	25
5+ Highers	69	67	62	72	62	67	63

The picture for entrants to advanced courses is more complicated. Up until 1990, about half of them had 3 or 4 Highers; however, in 1993, this proportion fell to 31% (see Table 4.4). The late 1980s and early 1990s saw a general increase in the proportions of entrants to advanced courses with 1 or 2 Highers, rising to 42% in 1993. In most years, the majority of entrants with 1 or 2 Highers started advanced courses (76% in 1993: table not shown).

Table 4.4: The qualifications of entrants to advanced courses

	1978	1980	1982	1984	1988	1990	1993
1-2 Highers	17	24	23	18	39	28	42
3-4 Highers	57	54	48	58	43	51	31
5+ Highers	15	11	13	19	6	16	9

Grades

A similar pattern emerges from an analysis of average Highers grades. In chapter 2 we saw that the average grade of entrants to HE had declined between 1980 and 1993. This trend can be attributed to a decline in the average grade of entrants to advanced courses, from 1.22 in 1980 to 1.07 in 1993. The average Highers grade of entrants to degree courses did not change significantly between 1980 (1.89) and 1993 (1.84). Over half of those starting degrees in 1993 (52%) had gained at least one Higher at grade A, compared with 6% of advanced course entrants.

Other qualifications

The proportion of degree entrants with CSYS increased between 1980 (33%) and 1993 (43%). Very few advanced course entrants had CSYS passes in either year (1980: 4%; 1993: 7%).

The increase in the proportion of advanced course entrants with fewer than 3 Highers (Table 4.4 above) coincides with the period after 1984 when SCOTVEC modules became available as an alternative qualification for HE. Over half (52%) of advanced course entrants had gained SCOTVEC modules, compared with 40% of degree entrants in 1993. Among degree entrants, those with fewer than 3 Highers were more likely than those with 3 or more Highers to have attained at least one SCOTVEC module. However, over half (53%) of those with fewer than 3 Highers in 1993 had attained no modules and only 21% had attained 3 or more modules. Thus, for the majority of those with fewer than 3 Highers, their entrance to degree courses is not explained by their attainment of modules. Amongst those starting advanced courses, there were no significant differences in attainment of modules by those gaining above or below 3 Highers (< 3 Highers: 53% had one or more modules; 3+ Highers: 49%). Of those with fewer than 3 Highers, only 25% had attained 3 or more modules.

Subjects and gender

Chapter 2 revealed gender differences in the proportions of HE entrants with Highers or CSYS passes in language, creative subjects and mathematics. These gender differences tended to be much greater among degree course entrants than among entrants to advanced courses. Table 4.5 illustrates this more clearly. Among degree entrants, more males than females had Highers or CSYS passes in mathematics, science and technical subjects, while more females than males had passes in creative subjects and language. Among advanced course entrants, the only subject in which there was a statistically significant difference was English, in which more females than males had passes. However it is likely that even among advanced course entrants a more detailed analysis, which distinguished different subjects within categories such as science and technical subjects, would reveal more gender differences.

Table 4.5: Percentage of males and females with Highers/CSYS passes in different subjects (1993)

	Degree entrants		Advanced course entrants	
	Males (N=483)	Females (N=471)	Males (N=160)	Females (N=186)
Mathematics	79	66	25	21
Science	82	74	33	32
Technical subjects	27	18	20	28
Language	18	35	4	9
Creative Subjects	15	26	13	16
Social Subjects	64	65	39	32
English	87	90	50	62

The qualifications of S5 and S6 entrants

In chapter 2 we reported that the average Highers qualifications of S5 entrants to HE had declined between 1980 and 1993 while the average qualifications of S6 entrants had been relatively stable over time. However, once again the trend differed for those entering degree courses and advanced courses respectively (Table 4.6).

Among those entering degree courses, the average number of Highers did fall slightly between 1980 and 1993 among S5 entrants, but it increased among S6 entrants. There was no significant trend in the average grade of either group.

In 1980 S5 and S6 degree entrants had a similar number of Highers, but S5 entrants had a better average grade, while in 1993, S6 entrants had more Highers and a similar average grade compared with S5 entrants.

Entrants to both types of course who stayed on at school to S6 tended to improve their qualifications during S6 ie they gained more Highers and improved on their average grade (all differences significant at $p<0.001$ level).

Table 4.6: Attainment of S5 and S6 entrants to degrees in 1980 and 1993 (bases in Appendix 2)

	1980	1993	
Average no of Highers			
S5 entrants	4.6	3.9	*p<0.001*[♦]
S6 entrants	4.7	5.0	*p<0.001*
	NS[♦♦]	*p<0.001*	
S6 entrants (at end S5)	3.6	3.4	*p<0.05*
Average grade[♦♦♦]			
S5 entrants	2.1	1.9	*NS*
S6 entrants	1.8	1.9	*NS*
	p<0.001	*NS*	
S6 entrants (at end S5)	1.7	1.7	*NS*

♦ *Probability that this difference occurred by chance, calculated using t tests*

♦♦ *Probability not significant, calculated using t tests*

♦♦♦ *Average grade calculated on the following basis: A=3, B=2, C=1.*

Table 4.7 shows that the Higher qualifications of S5 entrants to advanced courses declined substantially between 1980 and 1993. The 1993 entrants had fewer Highers and lower grades. S6 entrants to advanced courses had fewer Highers in 1993 than in 1980, but the same average grade.

Table 4.7: Attainment of S5 and S6 entrants to advanced courses in 1980 and 1993 (bases in Appendix 2)

	1980	1993	
Average no of Highers			
S5 entrants	2.7	1.5	*p<0.001*♦
S6 entrants	3.2	2.6	*p<0.01*
	p<0.05	*p<0.001*	
S6 entrants (at end S5)	1.8	1.3	*p<0.001*
Average grade♦♦♦			
S5 entrants	1.3	0.9	*p<0.001*
S6 entrants	1.2	1.2	*NS*♦♦
	NS	*p<0.001*	
S6 entrants (at end S5)	1.1	0.9	*p<0.01*

♦ *Probability that this difference occurred by chance, calculated using t tests.*
♦♦ *Probability not significant, calculated using t tests.*
♦♦♦ *Average grade calculated on the following basis: A=3, B=2, C=1.*

Socio-economic status

Social class

Chapter 2 showed that in most years about twice as many HE entrants had fathers in non-manual occupations as had fathers in manual occupations (eg 59%: 29% in 1993). The following two tables (4.8 and 4.9) show that this disparity existed among both degree entrants and advanced course entrants, but was most marked amongst degree entrants. For both types of entrants, children of 'non-manual' fathers were over-represented in all years compared with the distribution among all school leavers. (In 1993, children of non-manual fathers comprised 37% of all school leavers, and children of manual fathers comprised 40%.)

Table 4.8: Father's occupational classification of degree entrants

	1978	1980	1982	1984	1988	1990	1993
Non-manual	67	68	61	65	67	69	63
Manual	24	24	27	24	22	21	26
No info/occupation	10	8	2	7	11	10	11

Table 4.9: Father's occupational classification of advanced course entrants

	1978	1980	1982	1984	1988	1990	1993
Non-manual	53	51	43	48	53	47	48
Manual	36	42	44	41	34	41	37
No info/occupation	11	7	1	7	13	13	15

Most of the non-degree courses were provided in FE colleges. In his comparison of access to HE across the UK, Osborne (1999, p.45) found 'no clear-cut evidence that the further education route provides a path into higher education for young people from disadvantaged backgrounds which compensates for the comparatively lower levels of such students at Scottish universities'. Tables 4.8 and 4.9 suggest that non-degree provision at least partly compensated for class differences in degree-level provision, but without directly comparable data on the other parts of the UK we cannot say whether they compensated sufficiently to affect the comparisons with England, Wales and Northern Ireland. Our best guess, on the basis of our social class data in chapters 2 and 4 and the figures reported by Osborne, is that if FE and non-degree provision are taken into account working-class representation in Scottish HE may be marginally better than in England but lower than in Wales or Northern Ireland.

The proportion of degree course entrants from manual backgrounds tended to decline during the 1980s but increased in 1993, perhaps as a result of expansion. The trend among advanced course entrants is more erratic, possibly reflecting sampling fluctuations due to smaller sample numbers and/or changes in the composition of advanced courses. However Tables 4.8 and 4.9 do not tell the full story about social class inequalities, because they do not allow for the changing class composition of school leavers. Table 4.10 expresses social class inequalities in entry to HE in terms of odds ratios, analogous to those discussed in chapter 3. The first two rows show odds ratios for entry to degree and advanced courses respectively, based in each case on all school leavers. However the inequalities in entry to advanced courses are lower, partly because more of the middle class school leavers entered degree courses instead. The third set of figures in Table 4.10 allows for this and shows odds ratios for entry to advanced courses among those who did not enter degree courses.

Table 4.10: Odds ratios: entry to degrees/advanced courses by father's occupation (non-manual v manual) (bases in Appendix 2)

	1978	1980	1982	1984	1988	1990	1993
Degree	7.3	6.9	5.2	5.7	5.5	5.4	3.7
Advanced course	3.3	2.5	1.8	2.0	2.0	1.5	1.4
Advanced (degree entrants excluded)	4.2	3.3	2.5	2.7	2.9	2.0	2.2

The table shows that inequalities in entry to degree and advanced courses respectively followed a similar trend over the period, declining in the early 1980s, rising again in the mid 1980s and then declining more substantially by 1993. The decline in inequalities, therefore, affected both types of HE. However inequalities in entry were consistently lower for advanced courses than for degree courses, and the third row of figures in Table 4.10 confirms that was not simply due to the fact that many middle class leavers had already been creamed off by degree courses. In this respect we may conclude that advanced courses contributed to wider access. However this does not tell us whether advanced courses widened access by virtue of being more 'working-class friendly' in their recruitment processes, or simply

because they recruited school leavers from attainment bands in which working class youngsters were better represented. As we have seen, working class school leavers tended to have lower qualifications, and school leavers with lower qualifications were more likely to enter advanced courses rather than degree courses.

We explore the influence of social class and other factors on entry to HE in chapters 5 and 6. In Figure 4.1 we provide a simple test of whether recruitment to advanced courses was more 'working class friendly' than to degree courses, by comparing the proportion who entered degree rather than advanced courses among the relatively well qualified school leavers with 3 or more Highers. Even among these leavers there was a link between social class and type of course. Nearly all those from non-manual backgrounds entered degrees rather than advanced courses. A larger proportion of those from manual backgrounds entered advanced courses; the proportion entering degrees increased but did not catch up with the non-manual proportion. Figure 4.1 suggests that the lower class inequalities in entrance to advanced courses were not simply the result of the lower qualification levels required for entry.

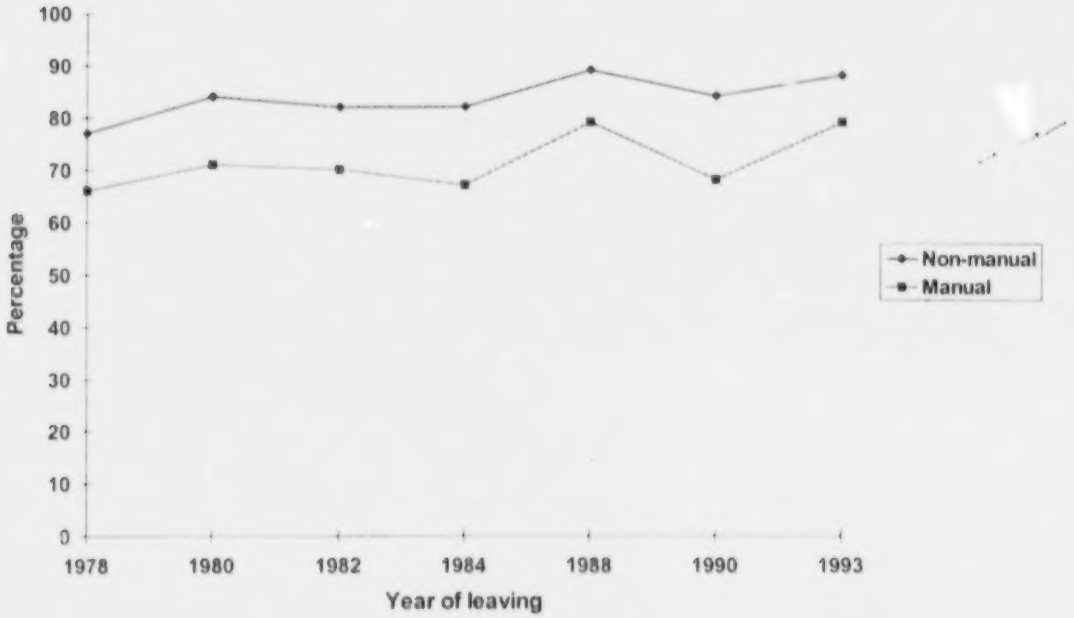

Figure 4.1: Percentage of entrants with 3 or more Highers from different social class backgrounds who started degrees rather than advanced courses (bases in Appendix 2)

Parental education

In 1993, the distribution of advanced course entrants in terms of mother's educational level was very similar to the distribution in the population as a whole (16 years or less: 62%; 17 years or beyond: 21%). However, the distribution of degree entrants was very different, with those with less well-educated mothers being under-represented (46%) and those with more educated mothers being over-represented (41%). This pattern was true for degree entrants in all years. Figures 4.2 and 4.3 illustrates this for degree courses and advanced courses

respectively. The darker bars on the right-hand side indicate the degree of over-representation of those in the "17+ years" category in each year; the bars on the left indicate degree of under-representation in the "16 years or less" category. Figure 4.3 shows that 1993 was the first year in which the distribution of advanced course entrants matched the population as a whole. In preceding years, those with more educated mothers did tend to be over-represented but not as markedly as amongst degree entrants. The patterns were very similar for father's educational level.

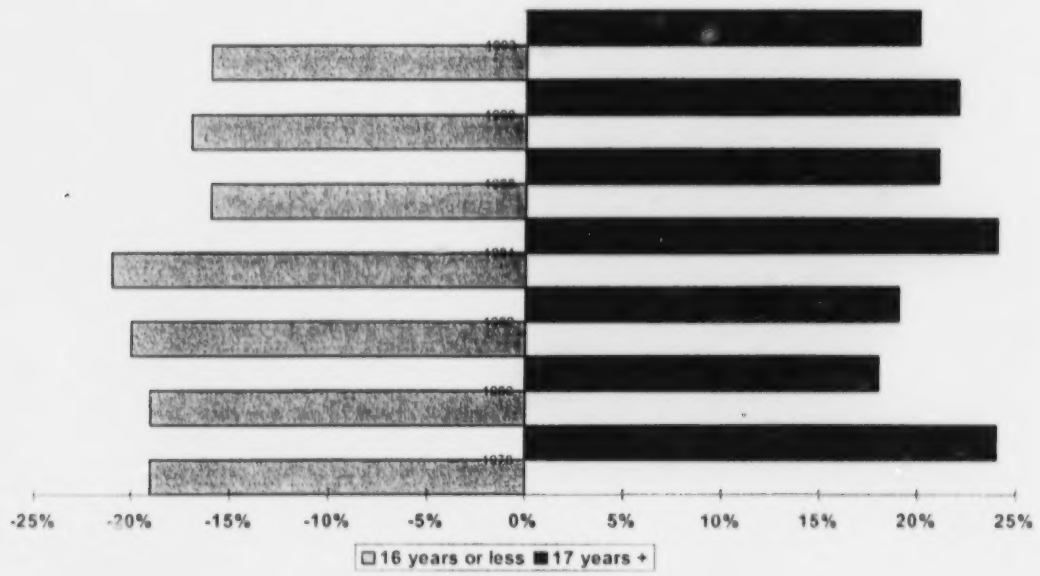

Figure 4.2: Mother's educational level of degree entrants: difference from sample as a whole in each year

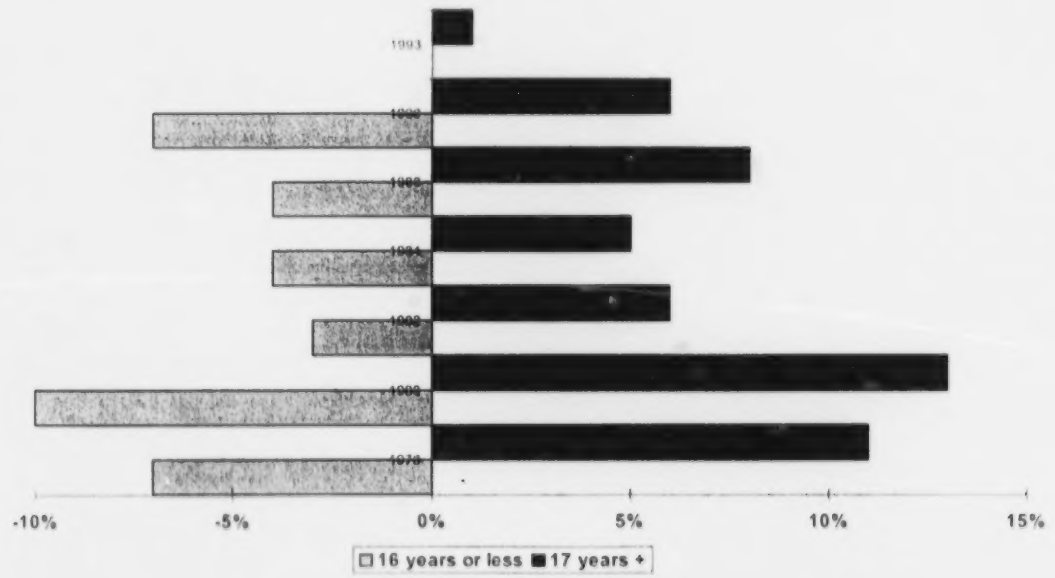

Figure 4.3: Mother's educational level of advanced course entrants: difference from sample as a whole in each year

If attainment is taken into account as one of the main factors affecting type of course started, there is still a small additional influence of parental education on type of course started in most years (see Figure 4.4). This was significant in all years except 1980 and 1988 (at $p < 0.05$ using chi-square tests).

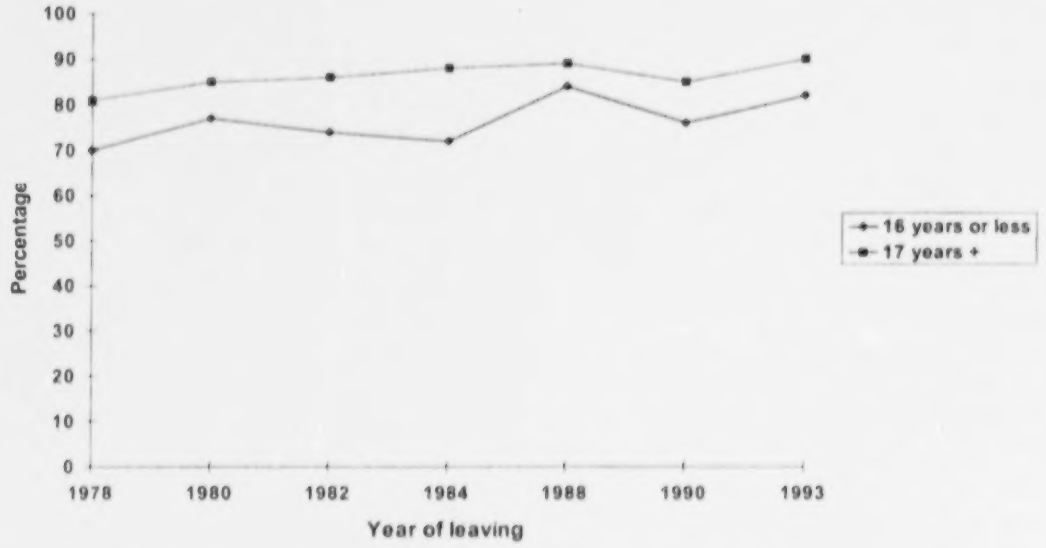

Figure 4.4: Percentage of entrants with 3 or more Highers with mothers with different educational levels who started degrees rather than advanced courses (bases in Appendix 2)

Type of school

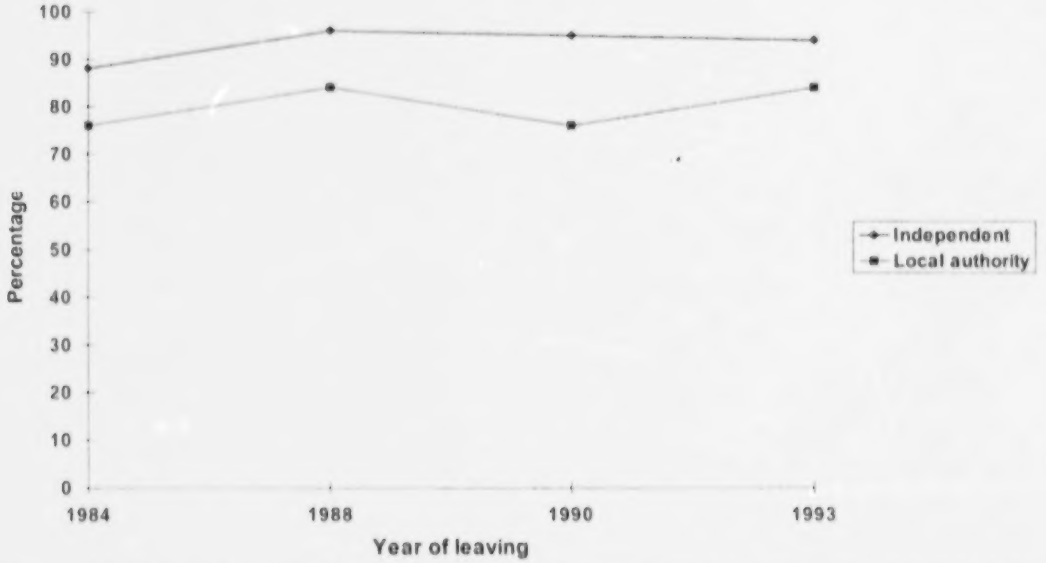

Figure 4.5: Percentage of entrants with 3 or more Highers from different types of school who started degrees (bases in Appendix 2)

Chapter 3 showed that leavers from independent schools were much more likely to enter HE than leavers from local authority schools, and that this effect was mediated to some extent by the higher average attainment of independent school leavers. Among entrants with 3 or more Highers, those from independent schools have also been relatively likely to start degrees rather than advanced courses, compared with their counterparts from local authority schools (see Figure 4.5). (This is statistically significant at $p<0.01$ level using chi-square tests, for all years except 1984.)

Part-time study

A small and diminishing minority of school-leaver entrants to HE started part-time courses, falling from 12% of entrants in 1978 to 4% in 1993. The majority of part-time students (between 71% and 100%) started advanced courses. In 1978 three-quarters of those starting part-time study were male, but by 1993 the balance of males and females had reversed and almost two-thirds of part-time entrants were female. This reversal pivoted around 1984, when the ratio of males to females was equal.

While most of those choosing part-time study started advanced courses, part-time students never accounted for more than a fifth of direct entrants to advanced courses in any year (see Table 4.11). When these figures are compared with national statistics on the proportions of part-time and full-time entrants of all ages to advanced courses, it is clear that direct school-leaver entrants to advanced courses were far less likely than entrants of other age groups to study part-time.

Table 4.11: Proportion of entrants to advanced courses studying part-time (SSLS and SOEID, 1995 and 1997)

	1980	1982	1984	1988	1990	1993
Direct entrants from school (SSLS)	18	17	13	20	19	13
All entrants (SOEID figures)	77	74	73	74	71	54
N for all entrants to advanced courses	31817	29334	29641	31076	32018	40026

Summary

- Nearly three quarters of school-leaver entrants to HE started degree rather than advanced courses; this proportion remained relatively stable despite the general growth in participation. Most of those starting degrees did so in HE institutions; a majority of those starting advanced courses did so in FE colleges. In 1993 there was a gender balance among both degree and advanced course entrants.
- Throughout the period at least three quarters of S6 leavers entering HE started degree courses. Up to 1990 more S5 leavers entered degree than advanced courses; by 1993 this pattern had reversed and more S5 leavers entered advanced than degree courses.
- Degree course entrants had better Highers qualifications than advanced course entrants and the gap between them widened. In 1993 around two-thirds of degree course entrants had 5 or more Highers and very few had fewer than three. The average Highers

qualifications of degree course entrants have remained relatively stable, while those of advanced course entrants declined during the late 1980s and early 1990s. In 1993 42% of advanced course entrants had 1 or 2 Highers; a quarter of these had 3 or more SCOTVEC modules.

- Gender differences in subjects passed at Highers or CSYS tended to be greater among entrants to degree courses than to advanced courses.
- School leavers from 'manual' social class backgrounds, those with less educated parents and those from local authority schools were relatively likely to enter advanced rather than degree courses. Levels of social class inequality in entry to advanced courses were smaller than for degree course entry. These differences are not wholly explained by the lower Highers attainments of advanced course entrants.
- Most school-leaver entrants to HE studied full-time. Part-time students declined from 12% to 4% of all entrants between 1978 and 1993; most took advanced courses, and they were increasingly likely to be female.

Discussion

Distinguishing between degree and advanced courses allows us to extend the analyses of the last two chapters in at least three ways. First, it shows that the expansion of HE has not been accompanied by a decline in the Highers requirements for admission to degree courses, at least up to 1993. On the other hand there is evidence of a decline in the Highers qualifications of entrants to advanced courses, and this decline is not readily explained by their possession of SCOTVEC modules instead. On one interpretation of these figures, there has been some 'dumbing down' in respect of advanced courses but not in respect of degree courses. On another interpretation, our data may reflect divergent approaches to standards in degree and advanced courses respectively: degree courses maintain standards by controlling the qualifications of entrants to courses, advanced courses maintain standards by controlling the quality of outputs.

Second, the analysis shows that advanced course entrants were recruited from a wider range of social backgrounds, and in this respect advanced courses contributed to wider access. To some extent this is to be expected, given the lower qualifications required for entry to advanced courses, and the link between social background and school qualifications. However even among well-qualified school leavers, those from less advantaged family backgrounds were relatively likely to enter advanced courses rather than degree courses. At the same time, the decline in inequalities noted in chapter 3 affected degree courses as much as advanced courses. This suggests that the explanation may lie in trends that affect the system as a whole, and specifically in the general expansion of HE.

Finally, this chapter extends our analysis of the changing role of S5 compared with S6 in the transition to HE. We saw in chapter 2 that S5 leavers who entered HE had lower qualifications than S6 entrants and that the gap between them increased. This gap has widened both among entrants to degree courses and - especially - among advanced course entrants. It has widened even further as a result of the growing tendency for S5 leavers to

enter advanced rather than degree courses, if they enter HE at all. These findings reinforce our conclusion about the declining significance of S5 as the exit point for high-flying university-bound students. Conversely, they reveal a growing route from S5 to advanced courses for young people with relatively low levels of Highers and modules.

Chapter 5
Factors influencing participation in HE

In chapter 3 we observed disparities in entrance rates among school leavers from different social backgrounds. We saw that entry was strongly correlated with Highers qualifications, that S6 leavers were more likely to enter than S5 leavers and that factors such as gender, type of housing, level of parental interest and truancy were all related to rates of entry. While in chapter 3 these factors were examined largely independently of each other, this chapter will use multivariate analysis to look at their combined effects, their relative importance in predicting entrance to HE and their relationships with each other. We do this using multilevel modelling (Goldstein, 1995), which also allows us to examine variation across schools in entrance rates, once other factors such as qualifications have been taken into account.

Chapter 4 revealed differences in the characteristics of those starting degrees compared with other entrants. For example, the disparity in entrance rates from different social class groupings is more marked among degree entrants than among other entrants. For this reason, we model influences on two outcomes: entry to all HE, and entry to degree courses only. Analyses throughout the Chapter refer to school leavers who left from S5 or S6 in 1993 (n = 2391).

We begin our analyses by examining the effects of five main factors on entrance to HE: qualifications, stage of leaving school, social background, gender and type of school. This model is referred to as the 'core model'. We then move on to a series of further analyses based on the core model. These examine the effects of other factors such as levels of truancy and the subjects studied for Highers/CSYS. They also explore in more detail gender differences in participation rates and assess the relative importance of S5 and S6 attainment in predicting entrance to HE.

The core model

Table 5.1 shows the estimates for the core model described above, predicting entrance to all HE and entrance to degree courses respectively. To aid understanding of these estimates, they have been translated into odds ratios (OR) displayed in Table 5.2. An OR of greater than one means that the probability of entering will increase if this factor is present. A value of less than one means the probability will decrease. The larger the value of the OR, the greater its effect on the probability. If the value is close to one, there will be little change.

Take as an example a male leaver with 3 Highers at grade C, no CSYS passes, who left school from S5 and whose father was educated to 16 years. He has a probability of entering HE of 0.49, which may be expressed as an odds of 0.49/(1-0.49) which is 0.96. (The odds are the ratio of the probability of entering to the probability of not entering HE, that is of 0.49 to 0.51.) How would his probability of HE have been different if his father had been educated to 17 years or later? The OR associated with father's education is 1.57; this is greater than 1.0, so having a more educated father increased the probability of entering HE. Multiplying the

odds of 0.96 by the OR of 1.57 gives a new odds of 1.51. Translating this back into a probability (odds/1+odds) gives 0.60. Thus having a more educated father increased the probability of entering HE from 0.49 to 0.60.

Table 5.1: Core model estimates (standard errors in brackets)**

	Entrance to all HE	Entrance to degree
1 Higher	0.47 (0.29)*	-1.74 (0.53)
2 Highers	1.55 (0.28)	-0.84 (0.46)
3 Highers	2.14 (0.29)	0.65 (0.42)
4 Highers	2.53 (0.31)	1.33 (0.43)
5 Highers	3.12 (0.34)	2.02 (0.44)
6+ Highers	3.93 (0.40)	2.77 (0.49)
Average Highers grade	0.36 (0.14)	1.30 (0.17)
No. of CSYS passes	0.44 (0.13)	0.72 (0.14)
No. of SCOTVEC modules	ns	ns
Stage left school (0 = S5, 1 = S6)	0.58 (0.16)	1.06 (0.23)
Father's education (0 = 16 or less/no info, 1 = 17+ years)	0.45 (0.14)	0.61 (0.16)
Gender (0 = male,1 = female)	-0.48 (0.12)	-0.45 (0.14)
School type (0 = local authority, 1 = independent)	ns	0.56 (0.26)
School denomination (0 = non-denominational, 1 = Catholic)	ns	ns
Constant term	-2.56 (0.21)	-4.26 (0.35)
Between-school variance (Ω_u)	ns	ns

* *The estimate is significantly different from 0 if its value is 2 times the standard error or greater.*
** *Estimates are on the logistic scale.*

Examining the other ORs in Table 5.2 allows us to determine the factors which did and did not influence entry to HE. Of the five factors examined, qualifications were the most important predictor of entrance to all HE and to degree courses. The number of Highers passed, the average Highers grade and the number of CSYS passes all had a significant influence on participation. Average grade and CSYS passes were relatively more important to those entering degrees. Table 5.2 indicates that those with fewer than 3 Highers were less likely to start degrees than those with no Highers. This suggests that those entering with no Highers must have had A levels. However, no information was available to verify this. Having SCOTVEC modules had no influence on entrance to HE. Leaving from S6 increased the probability of entering HE and had an even stronger influence on entrance to degrees. This was over and above its influence on qualifications gained.

Table 5.2: Odds ratios associated with different characteristics (from multilevel model estimates in Table 5.1)

	Entrance to HE	Entrance to degrees
6+ Highers vs 0 Highers	51.01	15.99
5 Highers vs 0 Highers	22.62	7.56
4 Highers vs 0 Highers	12.49	3.76
3 Highers vs 0 Highers	8.46	1.90
2 Highers vs 0 Highers	4.71	0.43
1 Higher vs 0 Highers	1.60	0.17
For each extra point on average Highers grade	1.44	3.66
For each CSYS pass	1.56	2.04
For each SCOTVEC module	ns	ns
Left from S6 vs S5	1.78	2.90
Father educated to 17+ years vs to 16 years or less/unknown	1.57	1.83
Female vs male	0.62	0.64
Independent vs local authority school	ns	1.75
Catholic vs non-denominational school	ns	ns
Odds of entry for reference category (a male who left a LA school from S5 with no qualifications, whose father was educated to 16 years)	0.08	0.01

We have already seen (in chapter 3) that social background was strongly associated with school qualifications and that this largely accounted for disparities in entrance rates (Burnhill, Garner and McPherson, 1990). The multilevel model confirms, however, that social background (in this case, father's educational level) did have a small additional influence on participation over and above its influence on school qualifications: school leavers with more educated fathers were more likely to enter HE, all other things being equal. Three measures of social background were tried in the model separately and in combination: social class (based on father's occupation) and separate measures for father's and mother's educational levels. Father's educational level alone gave the most significant estimate, and was therefore retained in the model. This should not be misinterpreted: since the three factors are highly correlated, father's educational level should be seen as representing a measure of social background, rather than as necessarily being the most important influence. Table 5.3 displays the predicted probabilities of entering HE for leavers with different characteristics, and enables us to quantify the effect of father's education. For example, a leaver with 3 Highers and an average grade of A, who left from S6, had a predicted probability of 0.78 of entering HE, unless his father was educated to 17 years or beyond, in which case the probability increases to 0.84. The probability of the same leaver starting a degree was 0.79 if his father was educated to 16 years or 0.88 if his father was educated to 17 or beyond. The difference is somewhat greater than for all HE, showing that social background had a slightly stronger influence on entrance to degrees than on entry to all HE. The last two probabilities are taken from Table 5.4, which is similar to Table 5.3 except that it shows probabilities of entering degree courses rather than all HE, and it shows the effects of two additional factors, CSYS passes and type of school.

Like Table 5.3 it only shows selected combinations of characteristics, for illustrative purposes.

Females were less likely than males with the same characteristics to enter HE or degree courses. Table 5.3 provides examples of the gender differences. A female with 5 Highers at grade B, who left from S6 and who had a father who was educated to 16 years, had a probability of entering HE of 0.80. A male in the same position had a probability of 0.87. The same female was also less likely than a male equivalent to start a degree (female: p = 0.73; male: p = 0.81) (Tables 5.3 and 5.4).

Table 5.3: Predicted probabilities of entering HE for leavers with different characteristics

No. of Highers (no CSYS)	Average Highers grade	Father's education level	Male		Female	
			Left S5	Left S6	Left S5	Left S6
3	C	16 or less	0.49	0.63	0.38	0.52
		17+years	0.60	0.72	0.48	0.62
	B	16 or less	0.58	0.71	0.46	0.60
		17+years	0.68	0.79	0.57	0.70
	A	16 or less	0.66	0.78	0.55	0.68
		17+years	0.75	0.84	0.65	0.77
5	C	16 or less	0.72	0.82	0.61	0.73
		17+years	0.80	0.88	0.71	0.81
	B	16 or less	0.78	0.87	0.69	0.80
		17+years	0.85	0.91	0.78	0.86
	A	16 or less	0.84	0.90	0.76	0.85
		17+years	0.89	0.94	0.83	0.90

Table 5.4: Predicted probabilities of starting a degree with different characteristics*

No. of Highers /CSYS	Average Highers grade	Father's education level	Male			Female		
			Left S5 LA School	Left S6 LA School	Left S6 Indep-endent	Left S5 LA School	Left S6 LA School	Left S6 Indep-endent
3/0	A	16 or less	0.57	0.79	0.87	0.46	0.71	0.81
		17+years	0.71	0.88	0.92	0.61	0.82	0.89
4/0	A	16 or less		0.88	0.93		0.83	0.89
		17+years		0.93	0.96		0.90	0.94
4/0	B	16 or less		0.67	0.78		0.57	0.70
		17+years		0.79	0.87		0.71	0.81
4/1	B	17+years		0.88	0.93		0.83	0.90
5/0	B	16 or less		0.81	0.88		0.73	0.82
		17+years		0.88	0.93		0.83	0.89

* *For illustrative purposes, each row of the table shows the effect of varying one factor*

Attending an independent school had an effect on entrance to degrees but not on entrance to all HE. As seen in chapter 3, the disparity in entrance rates to HE from independent and

maintained schools was accounted for by the different levels of qualifications gained. However, those leaving independent schools were more likely to enter degrees than other leavers with the same qualifications. For example, the female school leaver described in the previous paragraph (with 5 Highers at grade B, who left from S6, with a father educated to 16 years) had a probability of entering a degree course of 0.73 if she had attended a maintained school and of 0.82 if she had been to an independent school. School denomination had no influence on entrance to either HE or degree courses.

One of the strengths of multilevel modelling is that it allows an examination of whether different schools had significantly different entrance rates, over and above differences attributable to individual factors such as qualifications and social background of pupils. Schools did have different entrance rates to HE and to degrees. However, these were accounted for by different levels of qualifications attained by pupils in those schools.

The influence of other factors

The findings reported in chapter 3 suggested that family composition in S4, type of housing, levels of parental interest in a child's studies and levels of truancy were all associated with entrance to HE. Further analysis revealed that, of these, only truancy was associated with HE independently of the educational and background variables in the core model. Those who reported having truanted for days or weeks at a time were less likely to enter HE than those who had never or only infrequently truanted. However we might also expect truancy to influence entrance to HE through its effect on attainment. The negative association of truancy with HE independent of attainment may mean that both of these variables were influenced by the same attitudinal and motivational factors - such as a dislike of study or a weak motivation to achieve high levels of attainment - rather than that truancy directly influenced entry to HE. Type of housing, family composition and parental interest did not have a significant additional influence on entrance. Any influence that these factors may have had was therefore mediated through other factors such as higher attainment.

The influence of subjects studied

The number of Highers and the average grade of pass have been shown to be important influences on entry to HE. In addition, variables were added into the model to determine whether having Highers or CSYS passes in particular subject areas influenced participation. Passes in maths increased the probability of entering relative to passes in other subjects, while passes in social subjects, creative subjects and technical subjects decreased the probability relative to other subjects. Passes in English, science or languages had no additional influence on participation (see Table 5.5).

Table 5.5: Given total number of Highers/CSYS passes, odds ratios for Highers/CSYS passes in different subjects

	Entrance to HE	Entrance to degrees
Maths	1.60	1.74
Social subjects	0.67	NS
Creative subjects	0.48	0.59
Technical subjects	0.69	NS

When predicting entrance to degrees, only Highers/CSYS passes in maths or creative subjects had an additional influence on participation. Table 5.5 shows that a pass in maths had a slightly stronger positive influence than for entrance to all HE, while a pass in a creative subject had a slightly less negative influence.

Interactions with gender

It is clear that females were less likely than males to enter either HE or degrees, when qualification levels and other factors are taken into account. Further analyses were carried out to determine whether there were any significant interactions between gender and the other terms in the core model for entrance to HE. The only significant interaction term was for gender and number of Highers. Essentially, this means that the difference in entrance rates between males and females varied with the number of Highers. This is illustrated in Figure 5.1. Females with between 2 and 5 Highers were less likely than males to participate; however the gap narrows for those with 6 or more Highers and for those with less than two. No other interaction terms were significant, suggesting that the gap in entrance rates between males and females was fairly uniform across values of other variables. A further study in this series focusing on high-achieving females will explore in more depth some of the findings in this report from the perspective of gender differences.

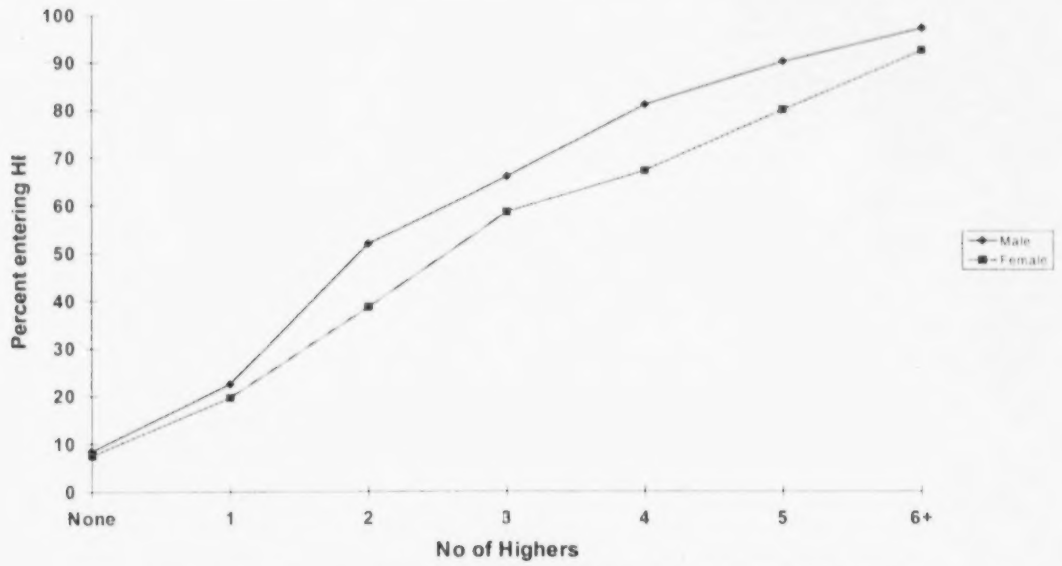

Figure 5.1: Percentages of males and females entering HE with different numbers of Highers

The roles of S5 and S6 attainment

It has already been shown that number of Highers is a significant predictor of entrance to both HE and degree courses. However, we are also interested in the relative importance of S5 and S6 attainment. Only S5 qualifications would be known at the time of application for those entering from S6, and, for this reason, they may play a more significant role in leavers gaining access to HE. The estimates in Table 5.6, however, show that Highers passed in S5 and S6 had similar weight in determining whether a leaver entered HE or a degree course. It is the overall total that was important, rather than whether Highers were passed in S5 or S6. The other effects in the model are broadly similar to those described for the core model.

Table 5.6 shows that average grade, number of CSYS passes and leaving from S6 were all important predictors of degree entrance. In Chapter 4 it was reported that entrants who stayed on to S6 tended to gain more Highers and improve their average grade during S6. All of these factors confirm the relative importance of S6 to the majority of leavers in preparing for entrance to degree courses.

Table 5.6: Estimates for Highers gained in S5 and S6

	Estimates (standard error)	
	Entrance to all HE	**Entrance to degrees**
No. of Highers passed in S5	0.61 (0.05)	0.44 (0.15)
No. of Highers passed in S6	0.67 (0.07)	0.43 (0.20)
(No. of Highers passed in S5)^{2} **	ns	0.08 (0.03)
(No. of Highers passed in S6)^{2} **	ns	0.11 (0.06)
Average Highers grade	0.38 (0.11)	0.84 (0.15)
No. of CSYS passes	0.44 (0.13)	0.75 (0.14)
No. of SCOTVEC modules	ns	ns
Stage left school (0 = S5, 1 = S6)	0.56 (0.16)	1.12 (0.27)
Father's education (0 = 16 or less/no info, 1 = 17+ years)	0.44 (0.14)	0.58 (0.16)
Gender (0 = male,1 = female)	-0.46 (0.12)	-0.48 (0.14)
School type (0 = local authority, 1 = independent)	ns	0.52 (0.25)
School denomination (0 = non-denominational, 1 = Catholic)	ns	ns
Constant term	-2.51 (0.16)	-5.14 (0.39)
Between-school variance (Ω_0)	0.09 (0.08)	0.08 (0.11)

* *The estimate is significantly different from 0 if its value is 2 times the standard error or greater.*

** *These elements are in the model to test whether number of Highers has a linear relationship with percent entering HE. If significant, it suggests a non-linear relationship.*

Summary

- Highers qualifications were the most important factor predicting entrance to HE. CSYS passes also influenced entry, but SCOTVEC modules did not. However, leaving school from S6, having a well-educated father and being male all increased the likelihood of participation.
- The factors predicting entrance to degree courses were largely similar to those predicting entrance to all HE, except that average grade and number of CSYS passes were more important and independent school leavers had a small advantage over maintained school leavers for entry to degree courses.
- Different rates of entrance from different schools were accounted for by different levels of qualifications attained in those schools and/or by the different family backgrounds of their students.
- The subject of Highers/CSYS passes made a difference: passes in maths were most strongly associated with entry to HE, and passes in social, creative or technical subjects were least strongly associated.
- Frequent truancy from school was associated with lower rates of entrance to HE. Any influence of living with a two-parent family, of having home-owning parents or of parental interest in their child's education was mediated through other factors such as higher attainment.
- The total number of Highers was more important than whether the Highers had been passed in S5 or S6. The importance of S6 as a preparation for degree entrance was confirmed.

Discussion

The multivariate analyses reported in this chapter confirm that qualifications were by far the most important determinants of entrance to HE. They also show that this influence varied across subjects, with Higher mathematics more strongly associated with entrance to HE than Highers in other subjects. Some of the other findings were perhaps less predictable. For example, the analyses show that CSYS passes were positively associated with entrance to HE (especially degree courses), despite the fact that they were not intended as an entrance qualification. Conversely, we found no effect of SCOTVEC modules on HE entry among 1993 school leavers, suggesting that if modules have developed as an alternative route to HE this has either occurred since 1993 or it has mainly affected the college sector.

It may not be too surprising that S6 leavers were, other things being equal, more likely to enter HE; most S5 leavers would have been too young for many courses, and many school students would have seen S6 as a natural step on the road to HE. However the finding that S5 and S6 Highers had equal status as predictors of HE entry is more surprising, and may bode well for the Higher Still reforms of post-16 provision. In the current system many S5 students currently enrol prematurely on Highers courses with poor prospects of success. Higher Still will add Intermediate 2 and other new levels below Highers; it hopes thereby to encourage these students to defer Highers attempts to S6 or later, when they will have climbed a more

extended progression ladder and should have greater chances of success. The finding that Highers gained in S6 are as valuable for HE as those gained in S5 may encourage this deferment.

Another positive finding is that entry rates did not vary across schools, once the effects of school qualifications and social background are allowed for. In other words, attending one school rather than another only affected a young person's chances of entering HE if it affected his or her level of qualifications. To the extent that measures to enhance access focus on particular schools, therefore, this should be because those schools are the best place to tackle other sources of disadvantage (such as family background or low qualifications) rather than because they are themselves failing to convert qualifications into HE places. Any effect of independent schools on entry to HE as a whole was similarly mediated by qualifications, although independent school leavers were relatively likely to enter degree courses rather than advanced courses.

The more negative - if unsurprising - conclusion from our analysis is that entrance to HE in Scotland was still not wholly meritocratic. Females were less likely than similarly qualified males to enter HE, and they consequently failed to convert their better average Highers attainments into a higher rate of participation in HE. School leavers from less advantaged family backgrounds were less likely than otherwise comparable school leavers to enter HE. And leavers from independent schools were more likely to enter degree courses. These findings invite the question: did these inequalities reflect different levels of aspirations and applications to HE, or were some school leavers disadvantaged by some kind of (conscious or unconscious) discrimination in the selection process? We address this question in the next chapter.

Chapter 6
Applying to HE

We have seen in preceding chapters that some groups are under-represented in HE, and that this cannot wholly be explained by their lower school qualifications. However so far we have only examined entrance rates to HE; we have not taken into account potential inequalities at the application stage. It could be, for example, that under-represented groups are simply not applying to HE or it could be that they are applying and not getting in. In this chapter we use SSLS data on applications to explore this issue. We first examine how rates of application and entrance to different types of course have changed over time, and we briefly describe the destinations of those who did not start the courses that they applied for.

Application rates over time

Increasing proportions of leavers applied to HE over the period 1978-1993 (Table 6.1): the total percentage applying increased from 19% in 1978 to 39% in 1993. The increase in application rates was particularly marked from the late 1980s onwards, corresponding with the general expansion in HE during that period. While application rates to degrees and to advanced level courses increased over the period, the proportion of leavers applying to both remained fairly stable at about 4%.

Table 6.1: Percentage of all leavers applying to HE

	1978	1980	1982	1984	1988	1990	1993
Degree only	8	9	16	13	19	18	25
Advanced only	7	7	5	5	5	6	10
Both	4	5	4	3	3	3	4
Neither	81	78	75	79	73	72	62
N (unweighted)	5948	5550	7047	6400	4928	3586	3469

The proportion of degree applicants who started courses increased sharply in the early 1990s, from 82% in 1990 to 91% in 1993 (see Table 6.2). Although there has been a general tendency for the level of applications to respond to the availability of places (Paterson 1992), during this period places in HE increased faster than applications. Before 1990 rates of entrance had remained fairly stable, at about 80%, since 1982. Across the same period, rates of entrance among advanced course applicants remained fairly stable at about 70%. Among leavers who had applied to both types of course, from 1988 onwards, approximately half started advanced courses and just less than one-third started degrees. As we see in Table 6.3, this group tended to have intermediate qualifications (3-4 Highers) which would offer them no assurance of gaining a place on a degree course.

Table 6.2: Percentage starting courses applied for (applicants only)

	1978	1980	1982	1984	1988	1990	1993
Degree only	83	87	79	81	82	82	91
N (unweighted)	*589*	*618*	*1207*	*990*	*999*	*1027*	*1001*
Advanced only	54	46	73	69	70	67	72
N (unweighted)	*443*	*463*	*381*	*341*	*278*	*252*	*376*
Applied to both: started degree	59	70	29	32	29	30	27
Applied to both: started advanced	24	15	49	40	47	50	48
N (unweighted)	*443*	*463*	*381*	*341*	*278*	*252*	*376*

Destinations of those who did not start HE

Of those who did not start the courses they applied for in 1993 (n=229), over one-third (35%) reported being in full-time work or training in spring 1994. Almost half (47%) started non-advanced level courses in the few months after leaving school and the vast majority of these were still in full-time education in the following spring. The remainder were in part-time work, unemployed or doing 'something else'.

Application rates among different groups

Table 6.3: Percent applying to HE among school leavers with different characteristics (1993)

	Applied HE	Applied degree only	Applied advanced only	Applied both	*N*
<3 Highers	16	3	11	2	*2062*
3-4 Highers	80	50	18	11	*500*
5+ Highers	95	86	4	5	*731*
1+ CSYS	93	84	6	4	*508*
No CSYS	31	16	12	4	*2785*
Average grade (Highers) < 1.6	67	33	23	11	*1009*
Average grade ≥1.6	84	73	7	4	*778*
Males	37	24	9	3	*1689*
Females	41	25	11	4	*1780*
Mother educated 16 or less	32	19	10	4	*2103*
17+ years	64	49	11	4	*777*
Father: 16 years or less	34	20	11	4	*2096*
17 + years	70	55	10	5	*633*
Social class:					
non-manual	59	41	12	6	*1382*
manual	29	16	9	3	*1359*
Independent school	78	69	4	5	*217*
Local authority school	36	22	11	4	*3252*
Non-denominational school	39	25	11	4	*3021*
Catholic school	35	25	7	3	*448*
Left S5	23	9	13	2	*697*
Left S6	71	49	15	7	*1793*
Average rate of application	***39***	***25***	***10***	***4***	

One of the main questions to be addressed is whether under-represented groups applied to HE but did not get in: that is, whether there was inequality in the process of selection among applicants. To begin to answer this we must first look at application rates among different groups. Table 6.3 shows rates of application by leavers with different characteristics. Leavers with 3 or more Highers, CSYS passes, above average Highers grades, well-educated parents, or fathers in non-manual occupations, those from independent schools and S6 leavers were all more likely to apply to HE than others. In addition, females were marginally more likely than males to apply. Some of these differences are accounted for by different levels of qualifications attained by different groups. For example, females had better Highers attainment than males and this may account for their slightly higher rates of application.

Table 6.4: Factors predicting application to HE/degree courses (estimates/standard errors) (N = 2391)

	Application to HE	Application to degrees*
1 Higher	ns	ns
2 Highers	1.51 (0.28)	ns
3 Highers	2.03 (0.30)	1.46 (0.36)
4 Highers	2.68 (0.33)	2.23 (0.38)
5 Highers	3.30 (0.38)	2.89 (0.40)
6+ Highers	3.94 (0.48)	3.79 (0.49)
No. of CSYS passes	0.53 (0.18)	0.65 (0.15)
Average Highers grade	0.32 (0.16)	0.86 (0.16)
No. of SCOTVEC modules	ns	ns
Gender (0 = male,1 = female)	ns	ns
Stage left school (0 = S5, 1 = S6)	0.90 (0.15)	1.24 (0.20)
Father's education (0 = 16 or less/no info, 1 = 17+ years)	0.43 (0.16)	0.59 (0.16)
Social class (0 = manual/no info, 1=non-manual)	0.23 (0.13)	-
School type (0 = local authority, 1 = independent)	ns	0.81 (0.29)
School denomination (0 = non-denominational, 1 = Catholic)	ns	ns
Constant term	-2.39 (0.20)	-4.01 (0.30)
Between-school variance (Ω_u)	0.23 (0.10)	0.24 (0.12)

**All degree applicants, including those who applied to advanced courses as well.*

Multilevel modelling allows us to assess the relative importance of these factors in predicting applications. Table 6.4 shows the estimates predicting entry to all HE and to degree courses

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respectively. The number of Highers, the average Highers grade and CSYS passes - but not SCOTVEC modules - were all important predictors of applications, both to HE as a whole and to degree courses. Leaving from S6 also increased the likelihood of applying. Once qualifications and the other variables had been taken into account, however, there was no significant gender difference: males and females with the same qualifications and social backgrounds were equally likely to apply. This was true for applications to all HE and to degree courses. On the other hand family background - represented by father's education and occupation in the model predicting applications to HE, and by father's education in the model predicting applications to degree courses - was significantly associated with applications, over and above the other effects in the model. There were significant differences in rates of application from different schools even when qualifications and background variables had been taken into account, suggesting that some schools were more likely to encourage applications than others. Differences in application rates from independent and local authority schools mirror the differences in patterns of entry seen in chapter 5: there were no differences in application rates to HE as a whole (net of qualifications and the other variables), but independent school leavers were more likely to apply to degree courses.

Further analyses - not shown in the table - showed that those who had truanted frequently from school were no more or less likely than others to apply to either HE or degree courses, once qualifications and other factors had been taken into account.

There is evidence therefore of inequalities at the application stage over and above the inequalities introduced by varying levels of attainment among different groups. Social background - but not gender - influenced application rates to all HE and to degrees, and type of school influenced applications to degrees. We now examine whether there were inequalities in entrance rates among different groups once they had applied to HE.

Entrance rates among applicants

Table 6.5 shows that entrance rates did vary among applicants with different characteristics. (In Table 6.5 applicants are classified by their highest level application: those who applied to both degrees and advanced courses are classified as degree applicants). Applicants with higher qualifications, those with more educated or middle-class parents, those leaving from S6 and males were more likely to enter HE than others. Those from different types of school did not have significantly different entrance rates.

Among those who applied to degree courses, a similar pattern emerges, except that stage of leaving school was not significant. For those applying to advanced courses, there were no differences by parental educational level, but there were differences by social class.

Table 6.5: Entrance rates of applicants with different characteristics (bases in Appendix 2)

	Applied HE, % starting	Applied degree, % starting	Applied advanced only, % starting
<3 Highers	68	48	67
3-4 Highers	86	75	88
5+ Highers	95*	94*	78*
1+ CSYS	93	93	-♦
No CSYS	81*	75*	-
Average grade (Highers) < 1.6	83	70	-
Average grade ≥1.6	92*	93*	-
Males	89	87	77
Females	80*	78*	68♦♦
Mother educated 16 or less	83	78	74
17+ years	88*	88*	74
Father: 16 years or less	83	80	73
17 + years	88*	87*	74
Social class:			
non-manual	87	85	77
manual	82*	78*	73*
Independent school	87	85	-
Local authority school	84	82	-
Non-denominational school	84	82	-
Catholic school	85	82	-
Left S5	79	78	76
Left S6	86*	83	73
Average entrance rate	*84*	*82*	*72*

* Significantly different at $p<0.05$ level using chi-square tests
♦ Not reported because cell size of less than 20
♦♦ $p<0.1$

Once again we use multilevel modelling to determine the relative importance of these different factors. Table 6.6 displays the model estimates for each of the factors, predicting entry to all HE and to degree courses respectively. It should be noted that a large majority of applicants, particularly to degree courses, start courses. This is likely to affect the robustness of estimates.

Among applicants to all HE, the number of Highers and CSYS passes were important predictors of entrance. Average Highers grade was apparently not. There is, however, a

significant correlation between number of Highers and average grade, which may explain why the estimate for average grade is not significant. Among degree-course applicants, qualifications were important predictors of entrance. In this case, average Highers grade was highly significant, whereas number of Highers was not. Again this at least partly reflects the significant correlation between the two, although it may indicate that grade of pass is more important for degree courses, while for advanced courses the number of passes (at C or above) is the more important factor.

Table 6.6: Factors predicting entrance among applicants to HE/degree courses

	Estimates (standard errors)	
	Entrance to HE (applicants only, N=1425)	**Entrance to degrees (applicants only, N=1064)**
1 Higher	ns	ns
2 Highers	1.67 (0.37)	ns
3 Highers	2.05 (0.38)	ns
4 Highers	2.59 (0.40)	ns
5 Highers	3.02 (0.48)	0.64 (0.31)
6+ Highers	3.88 (0.50)	ns
No. of CSYS passes	0.34 (0.15)	1.01 (0.20)
Average Highers grade	ns	1.45 (0.20)
No. of SCOTVEC modules	ns	ns
Gender (0 = male,1 = female)	-0.53 (0.15)	-0.77 (0.20)
Stage left school (0 = S5, 1 = S6)	0.58 (0.20)	ns
Mother's education (0 = 16 or less/no info, 1 = 17+ years)	0.50 (0.16)	0.59 (0.22)
School type (0 = local authority, 1 = independent)	ns	ns
School denomination (0 = non-denominational, 1 = Catholic)	ns	ns
Constant term	-2.58 (0.27)	-0.94 (0.51)
Between-school variance (Ω_0)	ns	ns

Both for HE as a whole and for degree courses social background (here represented by mother's educational level) influenced the probability that an application would result in entry. Those with more educated mothers and males were more likely to enter than others. Gender similarly influenced entry: fewer female applicants entered the courses they applied for. These differences are not accounted for by different qualification levels. The gender difference in entrance to degrees was even more marked than it was for all HE. Among

degree-course applicants with comparable qualifications and social backgrounds, if a male had a probability of entry of 0.80 his female counterpart would have a probability of 0.65. (For applicants to all HE the corresponding contrast would be 0.80 and 0.70.) Having a well-educated mother would convert a probability of entering a degree course from 0.70 to 0.81.

Thus for those from different social backgrounds there were inequalities both at the application stage and at the entrance stage. For males and females, the inequality lay at the entrance stage only. Males and females with the same qualifications were equally likely to apply, but females were less likely to actually start courses. No information is available on possible causes. We do not know, for example, whether fewer females were offered places, or whether those that did not start courses were offered places but chose to do something else instead. Both of these inequalities, however, give some cause for concern and should be the subject of further investigation.

Frequent truancy (added to the model at a later stage) had no significant influence on entrance rates to HE among applicants, given the other factors in the model. It was not possible to add it to the model predicting entrance to degrees because there were too few degree applicants (n = 11) who had truanted frequently from school.

Applicants who left from S6 were more likely to enter HE courses than S5 leavers, other things being equal, but among applicants to degree courses, entry rates were the same for leavers from S5 and from S6 with the same characteristics. The same was true of leavers from independent and local authority schools, even though independent school leavers were more likely to apply to degree courses. It is reassuring that while schools apparently varied in the levels of encouragement they offered their pupils to apply, there were no significant differences in entrance rates from different schools once individual-level factors had been taken into account.

Summary

- Application rates to HE increased over the period 1978-1993. Entrance rates among degree applicants increased from 82% in 1990 to 91% in 1993. Entrance rates for advanced course applicants remained fairly stable at about 70%.
- Almost half of those who did not start the HE courses that they applied for started non-advanced level courses instead.
- Qualifications were an important predictor of both application and entrance to all HE and degree courses.
- There were inequalities in both application and entrance rates among leavers from different social backgrounds. These differences were not all accounted for by qualifications.
- While males and females were equally likely to apply, male applicants were more likely than females actually to start courses. Again, these differences were not accounted for by qualifications.

- Independent school leavers were more likely to apply to degree courses, but no more likely to start them than others with the same characteristics.
- S6 leavers had no advantage over S5 leavers with the same qualifications in starting degree courses.
- Application rates among school leavers with similar qualifications and social backgrounds varied across schools. However, there were no between-school differences in entrance rates, once individual-level factors had been taken into account.

Discussion

Young people's social backgrounds may influence their chances of reaching HE at three stages: gaining qualifications for HE; applying for HE; and entering HE. The first of these stages is the most important; social background has a well-documented influence on school attainment. Nevertheless school leavers from less advantaged backgrounds - those with less well-educated parents or with fathers in manual occupations - are further disadvantaged by being less likely to apply to HE and less likely to enter once they have applied. A strategy for broadening access must embrace all three of these stages. Special entrance schemes go some way to addressing these problems, since they target under-represented groups directly, offering encouragement and alternative routes into HE. However, more needs to be done if the gap in entrance rates is to be further reduced.

Females are disadvantaged only at the third stage. They gain better qualifications than males and they are equally likely to apply to HE, but they are less likely to start courses once they have applied. The different entry rate for qualified females, reported in earlier chapters, appears not to be a result of lower aspirations. To the extent that aspirations to HE are reflected in application rates females' aspirations match those of males, but there are inequalities in entrance rates. Whether this can be explained at the institutional or the individual level is unclear. One possible explanation is that females apply to over-subscribed courses, while males do not. Another is that fewer females take up the offer of a place. These explanations can only be determined by further investigation.

Chapter 7
Discussion

Overview

In this report we have analysed changing patterns of school-leaver entry to HE using data from the Scottish School Leavers Survey from the late 1970s to 1993, and we have analysed the 1993 school leavers data in more detail to determine the relative importance of different factors which influence entry. In this final chapter we pull together our main findings and briefly discuss their implications.

The study illustrates the value of a regular multi-purpose survey such as the SSLS. Unlike other sources of data, for example the data routinely collected on HE students, the SSLS covers school leavers and thus enables us to compare those who enter HE with those who do not; it covers a broad range of topics - family, school, HE, attitudes and so on - allowing researchers to explore their connections; and it continues a series which enables trends to be studied over time. Nevertheless, our study has limitations which we need to record.

First, it covers only direct entrants from school. It not only excludes mature entrants, whose participation in HE is a major concern of a government committed to lifelong learning and wider access (Scottish Office 1998); it also excludes young people who take a gap year between school and HE, and the small but growing proportion who progress to HE via non-advanced courses in colleges of Further Education (Surridge and Raffe 1995).

Second, any project of secondary analysis has to make do with the data that have already been collected. The SSLS is an extremely versatile resource for research, but a survey conducted some time after the decision to apply for and enter HE cannot describe all the processes which led to HE entry. In this report we have concentrated largely on the more 'objective' variables which can be measured retrospectively; we have not, for example, examined school leavers' reasons for entering (or not entering) HE. Nor, for the most recent survey, have we been able to analyse the subjects studied in HE or the type of institution (such as 'new' and 'old' university) where they studied.

Third, the existing data cover the years up to 1993. We know from official statistics that participation in HE has continued to rise since then, and that a significant gap between female and male participation has opened up. We do not know if there have been other changes since 1993 in school-leaver transitions to HE, for example whether social inequalities have continued to decline. However our report provides a baseline by which future surveys will be able to measure progress. The 1999 SSLS will provide a first check of whether some of the trends we have discovered have continued.

Rising participation

The most significant trend over the period covered by our study was the growth in participation. The proportion of school leavers entering HE doubled in less than a decade,

from 16% of 1984 leavers to 33% of 1993 leavers; it has continued to rise since then. As we noted in the introduction, Scotland has developed a mass HE system within a relatively short period. Participation grew at a similar rate in degree courses and in advanced courses, and advanced courses continued to account for more than a quarter of school-leaver entrants to HE. However expansion may have further marginalised the small proportion of direct entrants who have studied part-time; by 1993 they comprised only 4% of school-leaver entrants, mainly on advanced courses.

In chapter 1 we identified a series of questions for research arising from the expansion of HE. These concerned, among other things, educational pathways to HE, entry standards and inequalities in access. Our answers to each set of questions are summarised at the end of each chapter, and we do not repeat them here. In this chapter we present a different perspective on our findings by pulling together some of the main themes which cut across chapters. We order our discussion around the main factors which influence entry to HE.

School qualifications

School qualifications are by far the most important determinants of entry to HE. They predict whether a school leaver applies to HE, and they predict the success of that application. They also predict the level of HE course: entrants to degree courses tend to be better qualified than entrants to advanced courses. Throughout the period, most school leavers with 5 or more Highers have entered HE; but in the late 1980s and early 1990s participation increased among those with 3 or 4 Highers, and it increased most of all among those with 1 or 2 Highers. As a result the average qualifications of entrants declined in the years up to 1993, although this decline affected advanced courses rather than degrees. On the basis of our evidence, therefore, admissions standards have not declined in respect of degree courses. It is harder to reach a firm conclusion about entrance to advanced courses, because many students entering these courses possess a wider range of qualifications than Highers, and some of these qualifications may not be recorded in the data. The qualification requirements for admission to advanced courses may have declined or they may simply have diversified. Either way, the critical issue is not the qualifications of those admitted to courses but the standards of their *outcomes*. If entrants are becoming more diverse and possibly have lower average qualifications, there is a case for giving higher priority to assuring the quality of the learning process and the validity of assessment.

Academic hierarchies have persisted. Some Highers subjects have been more strongly associated with HE entry than others, with mathematics the strongest predictor. CSYS was not intended as an entrance qualification, but CSYS passes have nevertheless been associated with entry to HE, independently of Highers qualifications. This was not simply because school leavers with CSYS were more likely to apply to HE: applicants to HE were more likely to enter if they had CSYS passes. Conversely, we have found no evidence that SCOTVEC modules influenced entry to HE. Indeed, few school leavers had significant numbers of modules, even among those with few or no Highers. In 1993, at least, the

qualifications route from school to HE was overwhelmingly an academic one. We must remember, of course, that many young people who qualified for HE on the basis of SCOTVEC modules may have done so in FE colleges; they would not have been identified in the SSLS as HE entrants. But the majority of 16 year-olds who continued in full-time education did so at school, in S5 and S6, and our analysis confirms that they had a strong incentive to take Highers rather than modules. If Highers are considered inappropriate for many of these students, at least in S5, the most likely remedy is not to offer a separate kind of certification, like modules, but to offer courses which keep students within the mainstream and lead to Highers over a longer period. This is the current strategy of Higher Still and our evidence suggests that it goes with the grain of the current system. Another piece of evidence which may augur well for Higher Still is the finding that Highers passed in S6 are worth as much as S5 Highers in predicting entry to HE. This may encourage students, for whom an S5 Higher is inappropriate, to use the longer progression ladder that is now available, and to take Intermediate courses in S5 and aim for Highers in S6 or later.

School stage

A declining proportion of HE entrants - little more than one in ten in 1993 - now enters HE from S5. In the past the S5 route to HE was followed by many 'high-flying' students, especially in the west of Scotland, who had achieved the necessary qualifications in S5. By 1993 a different pattern had emerged: young people entering HE from S5 typically had lower qualifications than entrants from S6, they were more likely to enter advanced rather than degree courses, and they were no longer mainly from the west of Scotland. Most HE entrants had stayed on to S6, possibly encouraged by the fact (noted above) that Highers achieved in S6 were as strongly associated with entry to HE as those gained in S5. A more surprising finding is that leaving from S6 was itself associated with a higher probability of entering HE, independently of qualifications and other background factors. However this may reflect the fact that many people stayed on to S6 because they hoped to enter HE, and in particular a degree course. Leaving from S6 was positively associated with applying to degree courses, other things being equal, but it did not influence the chances of entry among those who applied.

School differences

The proportion of school leavers entering HE varied across schools, but this variation could be explained by the different qualifications and social backgrounds of leavers from different schools. Allowing for the effects of qualifications and social background, we find that schools varied in the proportions of their leavers who applied to HE, but not in the proportions who entered. We reach a similar conclusion when we compare independent schools and local authority schools. Independent school leavers had much higher rates of participation in HE than leavers from local authority schools, although the gap had declined in the early 1990s. But once we allow for differences in school qualifications and social background we find that independent school leavers were no more likely to enter HE despite a higher propensity to

apply. However independent schools did appear to influence the type of HE entered: even allowing for differences in qualifications and social background, independent school leavers were more likely than local authority school leavers to enter degree courses. We found no effect of denominational schooling on entry to HE.

The practical conclusion of these findings is clear. The main way in which schools can influence their pupils' prospects of HE is by helping them to get good qualifications. Schools may have an additional role to play in encouraging socially disadvantaged students to aspire to HE; but such a role should be understood as compensating for social disadvantage, not as reversing any existing failure on the part of particular schools.

Gender

In 1993 male and female school leavers entered HE in roughly equal numbers, although females had caught up with males in the 1980s and we know from official statistics that their participation has increased faster than that of males since 1993. In 1993, however, the equal participation rates masked an under-representation of females relative to their Highers qualifications. Females performed better than males at Highers, but they were less likely to convert this better performance into HE places. Except for the highest and lowest qualified school leavers, females were less likely to enter HE than males with the same level of qualifications. This under-representation affected degree courses as well as HE as a whole.

In other respects, the factors determining entry were the same for males as for females; so what prevented females from participating at the same level as males with similar qualifications? One clue from the research is that females were as likely to apply to HE as similarly qualified males, but they were less likely to enter. A possible explanation is that they tended to apply to the courses that were more over-subscribed, but we cannot test this directly using our data. A future study in this series will use the SSLS to examine the prospects of high-achieving females in more detail.

Family background

One of the main findings of our study is the decline in social inequalities. School leavers from working class backgrounds, and those whose parents themselves had relatively low levels of education, continued to have much lower chances of HE than other school leavers, but the gap narrowed significantly between the late 1980s and the early 1990s. Social inequalities in entry to advanced courses tended to be narrower than inequalities in entry to degree courses, even allowing for the different qualification levels of entrants to the two types of courses. Nevertheless it is significant that inequalities in entry to degree courses declined as much as inequalities in entry to advanced courses. The trend must therefore be explained in broader terms than any particular sector of HE. It is likely that the general expansion of HE has contributed to the trend: that deeper access has led to wider access.

Inequalities have declined, but they have not disappeared. In 1993 middle-class school leavers were still more than twice as likely as working-class school leavers to enter HE. To

explain why social inequalities persist, we refer to the three stages of the process - qualification, application and entry - discussed at the end of chapter 6. The first stage is the one that leads to school qualifications. By far the most important reason for social inequalities is that young people from less advantaged backgrounds achieve lower qualifications at school. To eradicate inequalities in entry to HE it is necessary to start a long time before the end of secondary education; the transition from school to HE is primarily a point at which pre-existing social inequalities are confirmed. Nevertheless these inequalities may be widened during the second stage of the process, applying to HE. Even among the well qualified, fewer school leavers from less advantaged backgrounds apply. More could perhaps be done to persuade such students that HE is for them, and access schemes and similar measures to raise aspirations and to smooth the transition to HE may help. Focusing future expansion on advanced courses rather than degree courses could also, on the evidence of this research, encourage higher participation from less advantaged school leavers. The third stage of the process is entry: among school leavers from less advantaged backgrounds, applications to HE are less likely to result in entry to HE. There are several possible explanations: less advantaged school leavers may be less likely to be offered places on given courses; they may tend to apply to the more over-subscribed courses; or they may be less likely to take up offers of places that are made (perhaps through lack of confidence or a fear of the financial consequences of HE). With the data at our disposal we cannot test these different explanations, although we suspect that the third - the lower take-up of offers - may be part of the story.

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Appendix 1
Definitions and categories

Categorisation of subjects for qualifications

ENGLISH	English
SCIENCE	Anatomy, Physiology & Health
	Biology
	Chemistry
	General Science
	Geology
	Human Biology
	Physics
LANGUAGE	Classical Greek
	Gaidhlig
	Gaelic (Learners)
	Hebrew
	Latin
	French
	German
	Italian
	Norwegian
	Portuguese
	Russian
	Spanish
	Swedish
	Urdu
TECHNICAL SUBJECTS	Computing Studies
	Craft & Design
	Graphic Communication
	Technological Studies
	Agricultural Science
	Horticultural Science
	Metalwork
	Navigation
	Seamanship
	Technical Drawing
	Woodwork
	Home Economics
	Management & Information Studies
	Office & Information Studies
	Secretarial Studies
	Shorthand

MATHS	Maths Accounting & Finance Arithmetic Statistics
SOCIAL SUBJECTS	Classical Studies CSS Economics Geography History Modern Studies Social & Vocational Skills
CREATIVE SUBJECTS	Art & Design Drama Music
PHYSICAL EDUCATION	Physical Education
RELIGIOUS & MORAL EDUCATION	Religious Studies

Social Class

Based on father's occupation. Derived from Registrar-General's schema.

Category	*Definition*
I	Professional
II	Managerial
IIIn	Skilled non-manual
IIIm	Skilled manual
IV	Semi-skilled manual
V	Unskilled manual

Appendix 2

Bases

All bases are unweighted.

Table 2.5: Attainment of S5 and S6 entrants (bases)

	1980	1993
S5 entrants	298	138
S6 entrants	736	1134

Figure 3.1: Leavers with 3 or more Highers who entered HE (bases)

Year of entry	1978	1980	1982	1984	1986	1988	1990	1993
	1197	1282	1667	1575	1403	1270	1588	1231

Figure 3.2: Proportions of S5 and S6 leavers who entered HE (bases)

Year of entry	1978	1980	1982	1984	1986	1988	1990	1993
S5 leavers	1147	1270	1686	1561	1325	1316	877	697
S6 leavers	1036	1152	1657	1644	1515	1560	1463	1793

Figure 3.3: Percentage with different levels of attainment who entered HE (bases)

Year of entry	1978	1980	1982	1984	1986	1988	1990	1993
1-2 Highers	597	536	859	808	739	827	447	556
3-4 Highers	590	650	888	770	630	632	664	500
5+ Highers	607	632	779	805	773	638	924	731

Figure 3.4: Percentage of leavers who entered HE from different social class backgrounds (father's occupation) (bases)

AND

Figure 3.6: Leavers from different social class backgrounds (father's occupation) gaining 3+ Highers (bases)

Year of entry	1978	1980	1982	1984	1986	1988	1990	1993
Non-manual	1706	1803	2166	1969	1979	1865	1508	1382
Manual	3243	2968	3758	2998	2630	2144	1468	1359

Figure 3.5: Mother's educational level: (percentage of leavers entering HE) (bases)

AND

Figure 3.7: Mother's educational level and attainment: percentage of leavers gaining 3+ Highers (bases)

Year of entry	1978	1980	1982	1984	1986	1988	1990	1993
16 years or less	4596	4414	5676	4766	4215	3479	2349	2103
17+ years	576	516	702	659	691	696	644	777

Figure 3.8: Proportions entering HE from different types of school (bases)

Year of entry	1984	1986	1988	1990	1993
Independent	109	245	249	211	217
Local authority	6230	5506	4651	3365	3252

Figure 3.9: Family composition in S4 and entrance to HE (bases)

Year of entry	1980	1982	1984	1986	1988	1993
2 adults	4813	5974	5224	4840	3221	2895
Lone parent	549	830	753	725	597	452

Table 3.3 Percentages of leavers from different school regions who entered HE (bases)

Year of entry	1978	1980	1982	1984	1986	1988	1990	1993
Highland	198	227	289	281	197	221	159	179
Grampian	488	494	603	580	521	482	384	345
Tayside	454	419	526	493	461	386	300	314
Fife	388	375	465	423	375	348	229	293
Lothian	802	772	869	858	766	675	458	521
Borders	-	-	133	130	-	104	-	83
Central	314	299	405	352	292	280	207	211
Dumfries and Galloway	165	151	210	206	170	139	107	97
Ayr	455	419	525	439	463	393	278	247
Dumbarton	331	378	431	421	369	315	249	240
Glasgow	989	795	998	925	692	535	351	327
Lanark	692	598	776	641	644	495	386	316
Renfrew	436	392	497	398	388	386	276	187

Table 3.4: Percent who entered HE by level of parental interest in schooling in 1993 (bases)

How often did your parents ...	% of those who said *"Sometimes/Often"* who entered HE	% of those who said *"Never"* who entered HE
...discuss the day's events at school with you	2961	487
...encourage you in your own plans and hopes	3218	228
...urge you to do your best at school	3356	93
...discuss your school reports with you	3258	190

Table 3.5: Percent who entered HE by frequency of truanting in 1993 (bases)

	% who entered HE
Never	1451
Lesson here and there	1014
Day here and there	718
Several days at a time	166
Weeks at a time	101

Table 3.6: Experiences and attitudes towards school and entrance to HE (1993) (bases)

	% of those agreeing who entered HE	% of those disagreeing who entered HE
School has helped to give me confidence to make decisions	2149	1288
School has been a waste of time	297	3147
School has done very little to prepare me for life	1398	2040
School has taught me things which would be useful in a job	2183	1253
My school had a wide choice of after-school activities	1335	2100
My school dealt well with any bullying that went on	1792	1585
There was vandalism at my school during the school day	1967	1477
If I had a problem there was always a teacher I could talk to	2182	1253
Theft among pupils was common at my school	930	2500
Pupils respected the teachers	1379	2005
My school was well-thought of in the local community	2458	931
School work was worth doing	2836	602
My teachers didn't care about me	493	2940
There were too many troublemakers in my classes	1445	2003
My teachers helped me to do my best	2507	932
Teachers could not keep order in class	1001	2401
My friends took school seriously	1818	1589
Discipline was fair	2628	816
Teachers listened to my ideas and views	2335	1088
Teachers often gave me homework	2832	625
Teachers made sure I did homework they set	2244	1197

Figure 4.1: Percentage of entrants with 3 or more Highers from different social class backgrounds who started degrees (bases)

Year of entry	1978	1980	1982	1984	1988	1990	1993
Non-manual	570	612	731	671	628	724	616
Manual	233	258	358	308	208	270	271

Figure 4.4: Percentage of entrants with 3 or more Highers with mothers with different educational levels who started degrees (bases)

Year of entry	1978	1980	1982	1984	1988	1990	1993
16 years or less	549	598	795	639	526	581	492
17 years +	268	233	328	320	296	353	383

Figure 4.5: Percentage of entrants with 3 or more Highers from different types of school who started degrees (bases)

	1984	1988	1990	1993
Independent	37	126	134	128
Local authority	1060	798	952	869

Table 4.6: Attainment of S5 and S6 entrants to degrees in 1980 and 1993 (bases)

	1980	1993
S5 entrants	192	64
S6 entrants	584	880

Table 4.7: Attainment of S5 and S6 entrants to advanced courses in 1980 and 1993 (bases)

	1980	1993
S5 entrants	106	74
S6 entrants	151	254

Table 4.10: Odds ratio: entry to degrees/advanced courses by father's occupation (non-manual v manual) (bases)

	1978	1980	1982	1984	1988	1990	1993
Degree/Advanced course	4949	4771	5924	4967	4009	2976	2741
Advanced (degree entrants excluded)	4338	4057	4996	4185	3233	2141	1889

Table 6.5: Entrance rates of applicants with different characteristics (bases)

	Applied HE	Applied degree	Applied advanced only
<3 Highers	375	125	250
3-4 Highers	398	305	93
5+ Highers	695	667	28
1+ CSYS	475	448	27
No CSYS	993	649	344
Average grade (Highers) < 1.6	683	456	227
Average grade ≥1.6	660	608	52
Males	718	551	167
Females	811	602	209
Mother educated 16 or less	789	567	222
17+ years	531	442	89
Father: 16 years or less	824	578	246
17 + years	465	401	64
Social class:			
non-manual	875	709	166
manual	457	319	138
Independent school	172	164	8
Local authority school	1357	989	368
Non-denominational school	1345	1006	339
Catholic school	184	147	37
Left S5	173	82	91
Left S6	1312	1058	254

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